U.S. Army Center for Health Promotion and Preventive Medicine

U

S

TRAINING MUNITIONS HEALTH RISK
ASSESSMENT
NO. 39-EJ-1485-00
RESIDENTIAL EXPOSURE FROM INHALATION OF
AIR EMISSIONS FROM THE
M200 5.56-MM BLANK CARTRIDGE
DEPARTMENT OF DEFENSE IDENTIFICATION CODE: A080



C

Prepared by:

Environmental Health Risk Assessment Program

 \mathbf{H}

Prepared for:

U.S. Army Environmental Center

P

Published date:

15 June 2001

P

Approved for public release; distribution unlimited

M

20011218 133

Readiness Thru Health

U.S. Army Center for Health Promotion and Preventive Medicine

The lineage of the U.S. Army Center for Health Promotion and Preventive Medicine (USACHPPM) can be traced back over 50 years. This organization began as the U.S. Army Industrial Hygiene Laboratory, established during the industrial buildup for World War II, under the direct supervision of the Army Surgeon General. Its original location was at the Johns Hopkins School of Hygiene and Public Health. Its mission was to conduct occupational health surveys and investigations within the Department of Defense's (DOD's) industrial production base. It was staffed with three personnel and had a limited annual operating budget of three thousand dollars.

Most recently, it became internationally known as the U.S. Army Environmental Hygiene Agency (AEHA). Its mission expanded to support worldwide preventive medicine programs of the Army, DOD, and other Federal agencies as directed by the Army Medical Command or the Office of The Surgeon General, through consultations, support services, investigations, on-site visits, and training.

On 1 August 1994, AEHA was redesignated the U.S. Army Center for Health Promotion and Preventive Medicine with a provisional status and a commanding general officer. On 1 October 1995, the nonprovisional status was approved with a mission of providing preventive medicine and health promotion leadership, direction, and services for America's Army.

The organization's quest has always been one of excellence and the provision of quality service. Today, its goal is to be an established world-class center of excellence for achieving and maintaining a fit, healthy, and ready force. To achieve that end, the CHPPM holds firmly to its values which are steeped in rich military heritage:

- ★ Integrity is the foundation
 - ★ Excellence is the standard
 - ★ Customer satisfaction is the focus
 - ★ Its people are the most valued resource
 - ★ Continuous quality improvement is the pathway

This organization stands on the threshold of even greater challenges and responsibilities. It has been reorganized and reengineered to support the Army of the future. The CHPPM now has three direct support activities located in Fort Meade, Maryland; Fort McPherson, Georgia; and Fitzsimons Army Medical Center, Aurora, Colorado; to provide responsive regional health promotion and preventive medicine support across the U.S. There are also two CHPPM overseas commands in Landstuhl, Germany and Camp Zama, Japan who contribute to the success of CHPPM's increasing global mission. As CHPPM moves into the 21st Century, new programs relating to fitness, health promotion, wellness, and disease surveillance are being added. As always, CHPPM stands firm in its commitment to Army readiness. It is an organization proud of its fine history, yet equally excited about its challenging future.

REPORT DOCUMENTATION PAGE

Form Approved OMB No. 0704-0188

The public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden, to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports (0704-0188), 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number. PLEASE DO NOT RETURN YOUR FORM TO THE ABOVE ADDRESS. 3. DATES COVERED (From - To) 2. REPORT TYPE 1. REPORT DATE (DD-MM-YYYY) March 1999-August 2001 Technical Report 06-15-2001 5a. CONTRACT NUMBER 4. TITLE AND SUBTITLE Training Munitions Health Risk Assessment No.39-EJ-1485-00 Residential Exposure from Inhalation of the Air Emissions from the M200 5.56mm Blank Cartridge, Department of Defessise Identification Code: A080 5b. GRANT NUMBER 5c. PROGRAM ELEMENT NUMBER 5d. PROJECT NUMBER 6. AUTHOR(S) Joleen Mobley, Stafford D.F.R.Coakley 5e. TASK NUMBER 5f. WORK UNIT NUMBER 8. PERFORMING ORGANIZATION 7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) REPORT NUMBER U.S. Army Center for Health Promotion and Preventive Medicine 5158 Blackhawk Road Risk Assessment # 39-EJ-1485-00 Aberdeen Proving Ground, Maryland 21010-5422 10. SPONSOR/MONITOR'S ACRONYM(S) 9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES) **USAEC** U.S. Army Environmental Center ATTN: SFIM-AEC-PC Aberdeen Proving Ground, MD 21010-5401 11, SPONSOR/MONITOR'S REPORT NUMBER(S) SFIM-AEC-PC-CR-200150 12. DISTRIBUTION/AVAILABILITY STATEMENT Distribution Unlimited 13. SUPPLEMENTARY NOTES Point of Contact: Tamera Rush 410-436-6849 14. ABSTRACT This assessment evaluated the potential for human health effects to offsite residents breathing air emissions following use of the 5.56mm Blank Cartridge. This document present the evaluation of the potential for adverse human health effects to teh offsite residents breathing air emissions following the use of military firing ranges during training exercises. Study results showed no protential for health risks to the hypothetical resident from inhalation of air emissions from the 5.56mm Cartridge. To conduct this study, air emissions from the 5.56mm Cartridge were collected in a test chamber (at Aberdeen Test Center, Aberdeen, MD). This information was then used in an air dispersion model to determine ambient air concentrations at a location downwind from the site where the item was activated. Modeled air concentrations were combined with exposure information to estimate the amount of substances the hypothetical resident breathes. This intake was combined with the substance's health information, to determine if there is a potential for health risks from inhjalation of these substances. The health risk included both long-term and short term exposures to the modeled substance concentrations. Study results showed no potential for helath risks from inhalation of air emissions from the 5.56mm Blank Cartridge. 15. SUBJECT TERMS emissions, aberdeen test center, characterization, health risk, munitions, firing point 17. LIMITATION OF 18. NUMBER 119a, NAME OF RESPONSIBLE PERSON 16. SECURITY CLASSIFICATION OF: OF Tamera Rush **ABSTRACT** a. REPORT | b. ABSTRACT | c. THIS PAGE **PAGES** 19b. TELEPHONE NUMBER (Include area code) U U U UU 410-436-6849



DEPARTMENT OF THE ARMY

U.S. ARMY CENTER FOR HEALTH PROMOTION AND PREVENTIVE MEDICINE 5158 BLACKHAWK ROAD ABERDEEN PROVING GROUND, MARYLAND 21010-5403

MCHB-TS-EHR

TRAINING MUNITIONS HEALTH RISK ASSESSMENT NO. 39-EJ-1485-00 RESIDENTIAL EXPOSURE FROM INHALATION OF AIR EMISSIONS FROM THE M200 5.56-MM BLANK CARTRIDGE

EXECUTIVE SUMMARY

This assessment evaluated the potential for human health effects to offsite residents breathing air emissions following use of the M200 5.56-mm Blank Cartridge (M200) on firing ranges during training exercises.

To conduct this assessment, air emissions from the M200 were collected in a test chamber at the U.S. Army Aberdeen Test Center, Maryland. The data collected from the Firing Point Emission Study provided the amount and types of substances released from the M200. This information was then used in an air dispersion model to determine ambient air concentrations at locations downwind from the M200 firing location. Since the training facility in this assessment is hypothetical, the air model used assumptions that provided conservative estimates of air concentrations.

Modeled air concentrations were combined with exposure information (e.g., number of cartridges used per year) to estimate the amount of each substance the hypothetical offsite resident breathes. This estimate was then compared with the substance's health information, which was obtained from agencies such as the U.S. Environmental Protection Agency, to determine if there is a potential for health risks from inhalation.

The health risk assessment included both long-term (30 years) and short-term (15-minute or 1-hour) exposures to modeled substance concentrations. Assessment results, generated using conservative methods, showed that the hypothetical offsite resident breathing air as close as 200 meters (656 feet) from the M200 firing location is safe from these emissions. At locations where offsite residents are located less than 200 meters from the M200 firing locations, a more site-specific evaluation is recommended. It should be noted that at most training installations, training areas are over 1,000 meters (over half a mile) away from populated areas.

TABLE OF CONTENTS

1.	PURPOSE	1
2.	AUTHORITY	1
3.	REFERENCES	1
4.	BACKGROUND	1
	4.1 CARTRIDGES AND THEIR USE	1
	4.2 WHAT IS THE M200?	1
	4.3 USE OF THE M200	1
	4.4 ASSESSMENT SUMMARY	2
5.	DATA COLLECTION AND AIR MODELING	3
	5.1 EMISSION FACTORS	3
	5.2 BACKGROUND AND DESCRIPTION	3
	5.3 MODEL ASSUMPTIONS	3
	5.4 GENERAL METHODOLOGY	5
	5.5 USE OF MODEL OUTPUT	5
	5.6 DETERMINATION OF SUBSTANCE-SPECIFIC EMISSION RATES	5
6.	RISK ASSESSMENT	7
	6.1 EXPOSURE ASSUMPTIONS	
	6.2 TIME-AVERAGING	7
	6.3 TOXICITY ASSESSMENT	10
7.	RISK CHARACTERIZATION	14
	7.1 CHRONIC HEALTH RISK	
	7.2 ACUTE HEALTH RISK	15
	7.3 FACT SHEET	15
	UNCERTAINTY DISCUSSION	
9.	CONCLUSION	18
10	. RECOMMENDATIONS	18
11	POINT OF CONTACT	18

LIST OF APPENDICES

REFERENCES	APPENDIX A
AIR DISPERSION MODELING OUTPUT DATA	APPENDIX E
HEALTH-BASED SCREENING LEVELS	
AND ACUTE TOXICITY VALUES	APPENDIX C
RISK ASSESSMENT DATA	APPENDIX D
FACT SHEET SUBMITTED TO THE U.S. ARMY ENVIRONMENTAL	
CENTER	APPENDIX E
LIST OF TABLES	
TABLE 1 – SOURCE PARAMETERS	4
TABLE 2 – WORST-CASE METEOROLOGICAL PARAMETERS	5
TABLE 3 – AIR MODEL INPUT PARAMETERS	5
TABLE 4 - FREQUENCY OF USE FOR THE M200	7
TABLE 5 – EXPOSURE PARAMETERS USED TO DETERMINE	
TIME-AVERAGED CHRONIC AIR CONCENTRATIONS	8
TABLE 6 – SUMMARY OF RfCs USED FOR PETROLEUM	
HYDROCARBONS	12
TABLE 7- TYPES OF UNCERTAINTY	16

LIST OF ACRONYMS

AEC U.S. Army Environmental Center

AEGL Acute Exposure Guideline Levels

AIHA American Industrial Hygiene Association

Al Aluminum

ATC U.S. Army Aberdeen Test Center

ATSDR Agency for Toxic Substances and Disease Registry

ATV Acute Toxicity Value

CO₂ Carbon Dioxide

DODIC Department of Defense Identification Code

DOE U.S. Department of Energy

EPA U.S. Environmental Protection Agency

ERPG Emergency Response Planning Guidelines

HBSL Health-Based Screening Level

INPUFF Integrated PUFF Model

NAAQS National Ambient Air Quality Standards

NEW Net Explosive Weight

OEL Occupational Exposure Limit

PM₁₀ Particulate Matter under 10 microns in size

PRG Preliminary Remediation Goals

RBC Risk-Based Concentration

RfC Reference Concentration

TEEL Temporary Emergency Exposure Limits

TPH Total Petroleum Hydrocarbons

TSP Total Suspended Particulates

USACHPPM U.S. Army Center for Health Promotion and Preventive Medicine

TRAINING MUNITIONS HEALTH RISK ASSESSMENT NO. 39-EJ-1485-00 RESIDENTIAL EXPOSURE FROM INHALATION OF AIR EMISSIONS FROM THE M200 5.56-MM BLANK CARTRIDGE

1. PURPOSE

This document presents the assessment of the potential for human health effects to offsite residents breathing air emissions following use of the M200 5.56-mm Blank Cartridge (M200) on firing ranges during training exercises.

2. AUTHORITY

Memorandum, U.S. Army Environmental Center, 4 June 1999, Subject: Pyrotechnics Risk Assessment.

3. REFERENCES

See Appendix A for a list of references.

4. BACKGROUND

4.1 CARTRIDGES AND THEIR USE

Cartridges are cases that contain a primer, propelling charge, and projectile. The primer is needed to activate the propelling charge, which provides the force to send the projectile to a target. Examples of projectiles include bullets, rockets, and missiles. Cartridges are also referred to as "rounds" and are fired from weapons such as pistols or rifles.

4.2 WHAT IS THE M200?

The M200 is a blank cartridge used only in training. It has no projectile and is used to simulate firing in training exercises and for saluting purposes. The M200 can be identified by its crimped closure at the violet-colored cartridge tip (Reference 1). Each M200 cartridge is about the length of a man's thumb.

The M200 consists of a metal case containing mostly copper and zinc. The propelling charge is made up primarily of nitrocellulose and nitroglycerin. Nitrocellulose is commonly used in furniture lacquers, printing inks, nail polish, and as a primary ingredient in smokeless propellants for military and commercial use. Nitroglycerin is a component in dynamite and is used for military and industrial purposes such as mining and demolition.

4.3 USE OF THE M200

The M200 is used with the M16 series rifles. To use the M200, a device is attached to the muzzle of the rifle allowing for firing with blank ammunition. Firing with

blank ammunition allows soldiers to safely simulate combat and practice using rifles. The M200 is commonly used in ceremonies for saluting, such as the 21-gun salute at military funerals (Reference 2).

4.4 ASSESSMENT SUMMARY

The general assessment approach consisted of two main parts: air dispersion modeling and exposure assessment, which are briefly discussed in the paragraphs below. Sections 5 through 7 present a discussion of the methodology used for this assessment.

Emissions data used in the air dispersion modeling were obtained from the Firing Point Emission Study, conducted by the U.S. Army Aberdeen Test Center (ATC), at Aberdeen Proving Ground, Maryland (Reference 3). This study was funded by the U.S. Army Environmental Center (AEC) with the purpose of identifying and quantifying emissions from weapons firing. Data from this study were generated by firing munitions in a test chamber using weapons that are representative of those used by the U.S. Army during training. Emissions data for the M200 were generated by firing it from the M16A1 rifle.

The emissions data for the M200 were used with an atmospheric dispersion model to estimate the average concentrations that might be experienced by an offsite resident. Since this assessment is designed to provide results that would be applicable to most Army training facilities, the training area used in this assessment was a hypothetical one. While most training areas are at least 1,000 meters away from populated areas, as a conservative distance, it was initially assumed that a person could reside 100 meters downwind from the firing point (location where the rifle is positioned). In addition, air-modeling parameters were selected to mimic worst-case conditions.

The exposure assessment included calculations of time-averaged concentrations for both long-term (chronic) and short-term (acute) exposures. For the purpose of this assessment, air concentrations were averaged over 30 years for chronic exposures and 1-hour or 15 minutes for acute exposures. Using a screening approach, a substance's estimated time-averaged air concentration was then compared to chronic health-based screening levels (HBSLs) established by the U.S. Environmental Protection Agency (EPA) or acute toxicity values (ATVs) established by selected agencies depending on the exposure duration (i.e., 30 years versus 1-hour or 15 minutes). The comparison was made using the ratio of the HBSL or ATV to the estimated air concentration for each of the substances evaluated. If this ratio was less than one, no further evaluation was needed. This approach is conservative because the exposure assumptions used by the agencies, to establish HBSLs and ATVs, are likely to overestimate the exposures experienced by offsite residents living near firing ranges. If the chronic or acute averaged concentrations (Cchronic and Cacute) were greater than the screening levels, producing a ratio greater than one, further evaluation would be warranted to determine the potential for health effects. Note that concentrations greater than the screening levels do not indicate an onset of health effects, but rather, the potential for such.

5. DATA COLLECTION AND AIR MODELING

5.1 EMISSION FACTORS

Emission factors, used to derive the air modeling emission rates used in this assessment, were generated from the Firing Point Emission Study conducted by the ATC (Reference 3). The data provided by the ATC included the net explosive weight (NEW), the substances sampled, and substance-specific emission factors. Emissions data from the Firing Point Emission Study are included in the first five columns of the table located in Appendix B.

5.2 BACKGROUND AND DESCRIPTION

Air dispersion models are available to mathematically simulate plume behavior and to estimate downwind concentrations of substances emitted from various sources. However, specific models are not available to determine the dispersion of emissions from munitions used during training. Estimating the magnitude and location of these concentrations depends on many factors including the amount and type of emissions, the behavior of the source, and meteorological conditions. Since a specific model is not available for modeling the use of munitions during training, the U.S. Army Center for Health Promotion and Preventive Medicine (USACHPPM) evaluated numerous air models to determine which would be suitable for use with munitions used during training. The USACHPPM recommended using the Integrated PUFF (INPUFF) model to estimate the dispersion of emissions from various munitions sources (Reference 4).

The INPUFF Model (Reference 5) was developed to simulate dispersion from instantaneous or semi-continuous point sources. This Gaussian-integrated puff model is capable of addressing a cloud type release over short periods of time, and computations can be performed for a single point source for multiple receptors. The algorithms used to calculate concentrations assume a vertically uniform wind direction (with no chemical reaction) to compute the contribution of each cloud at a receptor for each time step/interval.

5.3 MODEL ASSUMPTIONS

Some assumptions were made to best represent the firing of the M200 cartridges. These assumptions were as follows:

Typically, with conventional point sources (such as incinerators), the cloud rise and formation are determined by characterizing flue gas exit velocity, temperature, and stack diameter. However, the M200 cartridges are used in conjunction with the M16 series rifles. For unconventional sources with no real physical stack dimensions, such as rifles, the stack height and diameter were assumed to be equal to the height of the barrel and the bore diameter. No exit velocity was used with this source because the emissions rates generated from the test data were obtained from sampling a stabilized cloud with no exit velocity. Table 1 includes the source parameters used to model the M200 cartridges.

TABLE 1: SOURCE PARAMETERS

Parameter	Input Value
Source/Stack Diameter	0.00556 meters
Source/Stack Height	1 meter
Source Exit Temperature	298.15 degrees Kelvin (°K) (or 77 °F)
Exit Velocity	0 meters/second
Initial horizontal dispersion coefficient (σ_y)	0.96 meters
Initial vertical dispersion coefficient (σ_z)	1.07 meters

- ▶ Initial cloud dimensions are preferred to model the air emissions from these types of releases. The dimensions are used to define the initial horizontal and vertical dispersion values (σ_y and σ_z) of the released cloud. This information was not measured during the studies at the ATC; therefore, the cloud dimensions were based on the test chamber dimensions and the volume of air sampled. By assuming an elliptical cloud with the prevailing wind direction being perpendicular to the rifle muzzle when fired, the test chambers radius would be equal to the initial vertical dispersion (σ_z), and the initial horizontal dispersion (σ_y), would be equal to one half the length of the test chamber. The cloud exit temperature was assumed to be equal to the test chamber temperature.
- ➤ For the purposes of this assessment, a hypothetical offsite resident was assumed to be located first at 100 meters, then at 200 meters directly downwind from the source. The meander of the cloud is a major factor when estimating concentrations at given locations downwind from the source. Assuming that the resident is directly downwind from the source is the same as assuming that there is no cloud meander and the center of the cloud migrates directly over the hypothetical offsite resident. This assumption provides the most conservative modeled concentrations.
- Since this assessment does not look at a specific training site, generic, worst-case meteorological data were used. To determine the worst-case meteorological conditions that would result in the highest air emission concentrations, the modeling was performed using the EPA Risk Management Program Guidance (Reference 6). This guidance includes tables for estimating the footprint of chemical releases and is intended to inform emergency responders of potential accidental releases. The EPA has defined most default conditions for meteorological modeling parameters. Table 2 lists the meteorological parameters that were used in the air model.

TABLE 2: WORST-CASE METEOROLOGICAL PARAMETERS

Parameter	Input Value
Wind Speed	1 meter/second
Atmospheric Stability	Category F
Wind Direction	270°
Ambient Temperature	293 degrees Kelvin (°K) (or 68 °F)

5.4 GENERAL METHODOLOGY

The model was run for a total calculation time of 200 seconds for the 100-meter location and 400 seconds for the 200-meter location. This was done to simulate a single round being fired and to ensure that the total mass of the cloud had passed the hypothetical resident locations. Concentrations were calculated every 2 or 4 seconds, depending on the location being modeled. The model results indicated that the initial cloud reached the hypothetical offsite resident at 200 meters within 160 seconds and dissipated below the lowest concentration the model calculated, which in this instance $(1 \times 10^{-12} \, \text{g/m}^3)$ occurred within 267 seconds. Table 3 contains the air model input parameters used in this assessment.

TABLE 3: AIR MODEL INPUT PARAMETERS

Parameter	Inpu	t Value
raiametei	100 meters	200 meters
Number of meteorological periods (NTIME)		1
Duration of each meteorological period (ITIME)	200 seconds	400 seconds
Number of updates to the source (NSRCDS)	1	100
Duration/time step between each source update (ISUPDT)	2 seconds	s/4 seconds
Total time modeled/Simulation Period (NTIME) (ITIME)= (NSRCDS) (ISUPDT)	200 seconds	s/400 seconds

5.5 USE OF MODEL OUTPUT

The concentrations provided by the INPUFF model were based on a unit emission rate of 1 gram/second from an emission source, and did not represent any substance-specific concentrations from the use of any weapons system. This unit emission rate is typically used for ease of modeling purposes. The relationship between the emission rate and predicted concentration is linear. Therefore, the ratio of the predicted concentration to the unit emission rate was multiplied by each substance-specific emission rate to provide substance-specific concentrations.

5.6 DETERMINATION OF SUBSTANCE-SPECIFIC EMISSION RATES

The actual substance emission rate for one item (ER₁) for each substance was calculated using Equation 1. Example 1 contains a sample calculation using this equation.

$$ER_1 = \frac{EF \cdot CV}{t}$$
 Equation 1

Where:

 ER_1 = emission rate for one item (g/sec)

EF = average adjusted emission factor (lb/item)

CV = conversion factor (453.59 g/lb)

t = release duration as obtained from the INPUFF model (sec)

Example 1

Sample Calculation Using Equation 1:

$$ER_1 = \frac{(2.25 E - 0.4)(453.59)}{(4)} \times 1 \text{ item}$$

= 2.557 E-02 g/sec

Calculation provided for Carbon Dioxide (CO₂) at the 200-meter location. Appendix B provides the averaged adjusted emission factor of CO₂ in lb/item.

Substance-specific ambient concentrations for one item (CONC) were calculated using Equation 2. A sample calculation using this equation is provided in Example 2. Appendix B contains estimated air concentrations for both the 100 and 200-meter locations.

$$CONC = ER_1 \cdot \frac{UC}{ER_{unit}}$$
 Equation 2

Where:

CONC = substance concentration based on one item (g/m³)

 ER_1 = emission rate for one item (g/sec)

 ER_{unit} = unit emission rate as used in the model (g/sec)

UC = concentration based on the unit emission rate (g/m³)

$$CONC = (2.557E - 02) \frac{(7.778E - 05)}{(1)}$$

$$= 1.989E-06 g/m^3$$

Calculation provided for CO₂ at 200-meter location.

6. RISK ASSESSMENT

6.1 EXPOSURE ASSUMPTIONS

Exposure assumptions were selected using a typical use scenario for the M200 during training exercises. The typical use scenario was provided by the AEC and is based on consultation with their senior training advisor (References 7, 8). The frequency of use for the M200 was required to determine how much substance an offsite resident would be exposed to in the time period of interest (i.e., acute or chronic exposure). Table 4 summarizes the general use scenario for the M200.

TABLE 4: FREQUENCY OF USE FOR THE M200

Parameter	Value Used
Number of cartridges used per year	1,089,120
Maximum number of cartridges used in 1-hour	1,000

6.2 TIME-AVERAGING

For the chronic assessment, time-averaged concentrations were calculated by assuming that the hypothetical resident would be exposed for 30 years. This is consistent with the exposure duration used by the EPA, which assumes that the resident spends 30 years at the same residence. By using the same exposure duration, the estimated time-averaged concentrations could be compared with their respective HBSLs, which are derived using standard EPA default assumptions.

Using the default residence time established by the EPA, the assumption was made that someone could be exposed to air emissions from 1,089,120 cartridges per year for 30 years. Table 5 lists the exposure parameters used to estimate concentrations for the chronic assessment. These parameters are based on the typical use scenario provided by AEC (Table 4) and the assumptions used in the air model run.

TABLE 5: EXPOSURE PARAMETERS USED TO DETERMINE TIME-AVERAGED CHRONIC AIR CONCENTRATIONS

Expedito Parameter	Valu	e Used
Exposure Parameter	100 meters	200 meters
Exposure Time (ET _{ctg})	3.333 min/cartridge ¹	6.667 min/cartridge ¹
Exposure Frequency (EF _{ctg})	1,089,120 cartridges/year	1,089,120 cartridges/year
Exposure Duration (ED)	30 years ²	30 years ²

¹Based on the total model time of 200 seconds (3.33 minutes) and 400 seconds (6.67 minutes) used in the air model run.

Chronic averaged concentrations were calculated using Equation 3. Example 3 shows how this calculation was performed using the total suspended particulates (TSP) concentration at 200 meters as an example. As indicated in Appendix C, TSP is noncarcinogenic, therefore, the averaging time is the same as the exposure duration.

$$C_{chronic} = \frac{CONC \cdot 10^6 \cdot ET_{ctg} \cdot EF_{ctg} \cdot ED}{525,600 \cdot AT}$$
 Equation 3

Where:

 $C_{chronic}$ = average chronic concentration (μ g/m³)

CONC = average modeled concentration for one cartridge (g/m³)

 10^6 = unit conversion (µg/g)

 ET_{ctg} = exposure time per cartridge (minutes/cartridge)

 EF_{ctg} = exposure frequency (cartridges/year)

ED = exposure duration (years)

525,600 = unit conversion (minutes/year)

AT = averaging time (years)

(carcinogenic endpoint: AT = 70 years noncarcinogenic endpoint: AT = ED)

²EPA default value.

Example 3 Sample Calculation Using Equation 3:

$$C_{chronic(TSP)} = \frac{(6.652E - 08)(10^6)(6.667)(1,089,120)(30)}{(525,600)(30)}$$

 $= 9.19E-01 \mu g/m^3$

Appendix B provides the average modeled concentration for one cartridge (CONC). Table 5 includes the exposure parameters.

Unlike the chronic assessment, only limited guidance for evaluating acute exposures is currently available. Since many cartridges may be fired in a short period of time, however, acute exposures cannot be overlooked. For the purpose of this assessment, acute exposure is defined as a 1-hour or 15-minute exposure. The 1-hour or 15-minute acute exposure averaging times allow for comparison with guidelines developed specifically for emergency planning purposes (see discussion on acute toxicity below).

The exposure frequency is based on the number of cartridges used per 1-hour or 15 minutes depending on the guideline used for comparison. This information is based on the use scenario provided in Table 4. To estimate air concentrations for potential acute health effects, it was conservatively assumed that 1,000 M200s are fired in one hour. The average acute concentrations were computed using Equation 4. Example 4 contains a sample calculation at 200 meters using this equation. Since TSP does not have an ATV, aluminum (AI) is used as the example substance.

$$C_{acute} = \frac{CONC \cdot 10^6 \cdot ET_{ctg} \cdot EF_{ctg}}{60}$$
 Equation 4

Where:

 C_{acute} = average acute concentration ($\mu g/m^3$)

CONC = average modeled concentration for one cartridge (g/m³)

 10^6 = unit conversion (µg/g)

ET_{ctq} = exposure time per cartridge (minutes/cartridge)

EF_{ctq} = exposure frequency (cartridges/hour)*

= unit conversion (minutes/hour)

* Based on 1-hour or 15 minute (0.25 hour) ATV

Example 4 Sample Calculation Using Equation 4:

$$C_{acute(Al)} = \frac{(1.711E - 09)(10^6)(6.667)(1000 / 0.25)}{60}$$
$$= 7.60E-01 \,\mu\text{g/m}^3$$

Appendix B provides the average modeled concentration for one cartridge (CONC) for Al. See Appendix C to determine the ATV used.

6.3 TOXICITY ASSESSMENT

The potential for health effects was determined by comparing time-averaged air concentrations to HBSLs, which are developed from a substance's known toxicity. These toxicity values typically include different levels of safety factors depending on the level of confidence of the critical study. Appendix C contains a table of screening toxicity values used for the chronic and acute assessments.

6.3.1 CHRONIC ASSESSMENT

The chronic assessment was conducted using a screening approach. Using this method, a substance's estimated time-averaged air concentration was compared to its HBSL. If this ratio was less than one, no further analysis was required. This approach is conservative because the exposure assumptions used by the EPA, to establish HBSLs, assume that the resident is continuously exposed for 350 days per year (assuming 2 weeks vacation per year). In contrast, exposure to air emissions from actual training activities at a firing range is intermittent and isn't likely to occur on a daily basis year round.

A hierarchy of sources was developed for selection of the HBSLs to quantitatively evaluate as many of the identified substances as possible. The hierarchy of sources used was as follows:

- Clean Air Act, EPA National Ambient Air Quality Standards (NAAQS) (Reference 11)
- > EPA Region 9 Preliminary Remediation Goals (PRGs) (Reference 10)
- ➤ EPA Region 3 Risk-Based Concentrations (RBCs) (Reference 9)

Some substances have neither PRGs nor RBCs because they have their own set of regulatory standards. Under the Clean Air Act, the EPA is required to establish NAAQS for several substances considered harmful to public health and the environment. Currently, NAAQS are available for seven substances. The NAAQS for the longer averaging time were used for the chronic assessment. Depending on the

substance, this can range from an 8-hour average to an annual average. In addition, since the majority of the measured TSP was PM_{10} (particulate matter under 10 microns in size) (Reference 3), the NAAQS for PM_{10} was used to evaluate the potential for health effects from exposure to TSP.

Next on the hierarchy, after the NAAQS, are the EPA Region 9 PRGs and the EPA Region 3 RBCs. Since the methodology used by EPA Region 9 to develop the PRGs generally results in lower values than the EPA Region 3 RBCs, the PRGs were first on the hierarchy of sources. RBCs were used when a PRG was not available. To ensure that the most recent information was used, the Internet sites of both EPA Regions were checked. The HBSLs used for this assessment are presented in Appendix C.

Although the general approach used by both EPA Region 3 and Region 9 is the same, the exposure assumptions differ enough so that final recommended values can vary to a certain degree. In both methods, a substance's screening concentration was selected using the toxicity endpoint that derives a lower concentration. For example, if a substance has a known systemic toxicity and is a carcinogen, the screening concentration was calculated using both toxicity values. To maintain a conservative approach, EPA then selected the lower screening concentration as the recommended PRG or RBC.

Example 5 shows a sample calculation of how a substance's estimated chronic concentration is compared to its HBSL using the TSP concentration at 200 meters as an example.

Example 5 Sample Calculation Comparing a Substance's Estimated Chronic Concentration to Its HBSL:

$$\frac{C_{chronic(TSP)}}{HBSL} = \frac{9.19E - 01}{5.00E + 01}$$
$$= 1.84E - 02 < 1$$

In this case, the resulting ratio is less than one, indicating further evaluation is not necessary.

Many petroleum hydrocarbons were detected but do not have specific screening levels. Therefore, the approach recommended by the Total Petroleum Hydrocarbon Criteria Working Group (Reference 13) was adopted to evaluate petroleum hydrocarbon mixtures. Based on the working group's assessment of various hydrocarbons, it was recommended that mixtures be separated according to a substance's number of carbons and its chemical class (i.e., aliphatic or aromatic¹).

¹ Aliphatic hydrocarbons are hydrocarbons in which the carbon atoms are joined by single covalent bonds consisting of two shared electrons (e.g., butane). Aromatic hydrocarbons have ring structures (e.g., benzene) (Reference 14).

Generally, as a substance's carbon number increases, its molecular weight increases, and it is, therefore, not a substance of concern via inhalation. The working group also concluded that aromatic hydrocarbons tend to be more toxic than aliphatic hydrocarbons (Reference 13). Table 6 tabulates the inhalation toxicity values used to evaluate exposure to petroleum mixtures. To be consistent with the methodology used in this assessment, the reference concentrations (RfCs) were converted to PRGs using Region 9 exposure assumptions. The resulting PRGs were used as the HBSLs for the petroleum hydrocarbons in this assessment. These values are presented in Appendix D.

TABLE 6: SUMMARY OF RfCs USED FOR PETROLEUM HYDROCARBONS1

Carbon Range	Aromatic Inhalation RfC (mg/m³)	Aliphatic Inhalation RfC (mg/m³)
C ₅ – C ₆ C _{>6} – C ₈		18.4
C>7 - C8	0.4	
$C_{>8} - C_{10}$ $C_{>10} - C_{12}$ $C_{>12} - C_{16}$	0.2	1.0
$C_{>16} - C_{21}$ $C_{>21} - C_{35}$	NA	NA

Reference 14

NA = not applicable for high molecular weight TPHs (C_{>16}) because substances in this carbon range are not volatile and therefore, inhalation is not a pathway of concern.

6.3.2 ACUTE ASSESSMENT

An established method for assessing acute health effects is not currently available. In 1995 the EPA recognized the need for acute exposure guidelines for emergency response purposes and created the National Advisory Committee for Acute Exposure Guideline Levels (AEGLs) for Hazardous Substances. Currently, AEGLs are available for only a few substances.

To overcome the absence of acute toxicity data for the purposes of human health risk assessment, several state regulatory agencies have suggested that guidelines developed for emergency purposes be used in the interim. Although suggestions have been made to use occupational exposure limits (OELs) by applying additional safety factors (References 15, 16), OELs were not used in this assessment because they introduce even more uncertainty than the use of emergency guidelines. The OELs are designed to protect the workplace environment, and assume 8 hours a day, 5 days a week exposures. By definition, these exposures are more chronic than acute.

In comparison, emergency planning guidelines are more appropriate because they are typically developed for exposures of 1-hour or less. In addition, safety

factors are included as part of the guideline development so that the values would be protective of the general population.

Emergency Response Planning Guidelines (ERPGs) published by the American Industrial Hygiene Association (AIHA) (Reference 17) and the Temporary Emergency Exposure Limits (TEELs) developed by the U.S. Department of Energy (DOE) (Reference 18) were used for this assessment, specifically the ERPG-1s and the TEEL-1s. Since TEEL-1s are intended for exposures up to 15-minutes, air concentrations compared to TEELs were averaged over a 15-minute period. Air concentrations compared to ERPGs and AEGLs were averaged over 1-hour, as these values are intended for 1-hour exposures.

For this assessment, the hierarchy of sources for ATV selection was as follows with each ATV defined below:

- ➤ EPA AEGL-1. "AEGL-1 is the airborne concentration of a substance above which it is predicted that the general population, including susceptible individuals, could experience notable discomfort, irritation, or certain asymptomatic, nonsensory effects. However, the effects are not disabling and are transient and reversible upon cessation of exposure."
- ➤ AIHA ERPG-1. "The maximum concentration in air below which it is believed nearly all individuals could be exposed for up to 1- hour without experiencing other than mild transient adverse health effects or perceiving a clearly defined objectionable odor."
- ➤ DOE TEEL-1. "The maximum concentration in air below which it is believed nearly all individuals could be exposed without experiencing other than mild transient adverse health effects or perceiving a clearly defined objectionable odor."

AEGLs were used first when available since they are developed specifically for the purpose of acute exposure assessments. The ERPGs were selected next, prior to a substance's TEEL, because they are vigorously reviewed before they are published whereas the TEELs are not.

Example 6 shows a sample calculation of how a substance's estimated acute concentration was compared to its ATV using aluminum concentration at 200 meters as an example.

Example 6

Sample Calculation of Comparing a Substance's Estimated Acute Concentration to Its ATV:

$$\frac{C_{acute(AI)}}{ATV} = \frac{7.60E - 01}{3.00E + 04}$$
$$= 2.53E - 05 < 1$$

In this example with AI, the ratio is less than one, indicating that further analysis is not necessary.

7. RISK CHARACTERIZATION

As previously described, the exposure assessment included calculations of time-averaged concentrations for both long-term (chronic) and short-term (acute) exposures. Using a screening approach, a substance's estimated time-averaged air concentration was then compared to HBSLs or ATVs. The comparison was made using the ratio of the HBSL or ATV to the estimated concentration. This approach is conservative because the exposure assumptions used by the agencies, to establish HBSLs and ATVs, are likely to overestimate the exposures experienced by offsite residents living near firing ranges.

If this ratio was less than one, no further evaluation was needed. If the chronic or acute averaged concentrations (C_{chronic} and C_{acute}) were greater than the screening levels, resulting in a ratio greater than one, further evaluation would be warranted to determine the potential for health effects. Note that concentrations greater than the screening levels do not indicate an onset of health effects, but rather, the potential for such.

The chronic and acute assessments were conducted as outlined in Section 6.3. Appendix D presents results from the M200 risk characterization.

7.1 CHRONIC HEALTH RISK

The assessment at the 100-meter downwind hypothetical resident location, indicated that the level of acrolein from the M200 emissions was greater than the screening level. The ratios of all other substances to their HBSLs were below one. Estimated concentrations were remodeled to a distance 200-meters downwind from the firing location. The results showed that at 200 meters the estimated concentration of acrolein had decreased to a safe level. The estimated concentrations for all other substances were further reduced with all ratios below one.

The ratio of estimated acrolein concentrations to the HBSL was 1.74 at the 100-meter location. Acrolein is formed when fats are heated and fuels are burned. It is commonly found in diesel exhaust and smoke from forest fires (Reference 19). Acrolein is classified as a noncarcinogen and the chronic HBSL (EPA Region 9 PRG) is based

on animal testing data (Reference 11). Acrolein is not expected to persist in the environment and its transport is limited because it is reactive and relatively unstable in the atmosphere (Reference 19). The half-life for acrolein in ambient air is 15-20 hours.

7.2 ACUTE HEALTH RISK

For the acute assessment, all ratios were below one at the 100-meter location, indicating that no acute health effects are expected from breathing the air emissions from the M200. However, air concentrations were modeled at the 200-meter location for consistency with the chronic assessment. Estimated concentrations at the 200-meter location were even lower than at 100-meters. Since all ratios for the acute assessment were below one, no further assessment was needed.

7.3 FACT SHEET

Appendix E includes a copy of the fact sheet submitted to the AEC. The fact sheet used results from this assessment to address health concerns related to inhalation of M200 air emissions.

8. UNCERTAINTY DISCUSSION

The limitations inherent in modeling and the added conservatism of the assessment contribute to the uncertainty of the assessment results. The risk assessment methodology typically includes safety factors that are embedded in the toxicity data to ensure adequate protection of the general population, particularly, susceptible individuals such as the sick, elderly, and children. Table 7 identifies areas of uncertainty associated with this assessment.

TABLE 7: TYPES OF UNCERTAINTY

Issue	Uncertainty	Direction of Effect
	Emissions Modeling	
Modeled versus real- time sampling	The air concentrations in this assessment were modeled. Actual air concentrations taken from the field may be higher or lower.	Varies
Frequency of use for the M200	Actual frequency of use for these munitions during training exercises may be different from those stated in this report.	Varies
Hypothetical resident assumed to be located directly downwind	Unless the area around the training facility is populated, the chances that a person living directly downwind is low.	Overestimates
Use of worst-case meteorological conditions	To ensure that this assessment is applicable to most training areas, worst-case meteorological conditions were used in the air model.	Overestimates
	Exposure Assessment	
Estimating time- averaged concentrations	Actual exposure from the M200 is intermittent. If one were to plot a person's exposure profile, the plot would consist of a series of spikes. Since current risk assessment methodology does not allow the assessment of the potential for health risks as a function of time, a single concentration, averaged over the exposure duration was used. In this assessment, the exposure durations used were 30 years and 1-hour or 15 minutes.	Varies
Comparing estimated concentration to established screening levels	The Region 3 and Region 9 HBSLs were developed assuming that the resident is exposed 350 days per year. It is unlikely for training with the M200 to occur for 350 days per year at a particular firing range.	Overestimates
Comparing estimated concentrations to established screening levels	Comparison to screening levels does not account for possible cumulative effects of exposure to more than one substance.	Underestimates
Screening assessment versus calculating an average daily intake	Calculating an average daily intake allows the use of scenario-specific assumptions. However, unless the ratio of concentration to screening level	Varies

TABLE 7: TYPES OF UNCERTAINTY

Issue	Uncertainty	Direction of Effect
	approaches one, a screening assessment is useful as a first-cut evaluation.	
Exposure to other munitions	Other munitions are typically used during the same training exercise. These items may contain similar or different substances from those detected in the M200.	Underestimates
	Toxicity Assessment	
Lack of toxicity data	Some substances were not quantitatively evaluated because they have no known toxicity data.	Underestimates
Modifying and uncertainty factors for toxicity data	Modifying factors and uncertainty factors of varying degree are typically applied to toxicological values. These factors are used to conservatively account for extrapolating from animal studies for human health evaluation, and to conservatively account for variation in human populations.	Overestimates

9. CONCLUSION

Using conservative assumptions, the assessment indicated that offsite residents who live as close as 200 meters directly downwind from the firing location are safe from breathing air emissions from the M200. It is believed that the assumptions contained in this analysis are conservative enough to be protective of all the population including the sick, elderly, and children.

10. RECOMMENDATIONS

At installations where offsite residents are located less than 200 meters from the M200 firing locations, a more site-specific evaluation is recommended. However, it should be noted that at most training installations, training areas are located at least 1,000 meters (over half a mile) away from populated areas.

The results from this assessment are intended for a hypothetical training facility, and actual results can vary depending on site-specific conditions. This assessment used conservative assumptions (e.g., worst-case meteorological conditions, receptor located directly downwind, etc.) and it is believed that most site-specific analyses would result in even lower concentrations. Therefore, the results from this assessment should be applicable to most training facilities, unless site-specific conditions vary significantly.

11. POINT OF CONTACT

Questions about this report may be directed to Ms. Joleen Mobley at (800) 222-9698 (ext 2953) or (410) 436-2953.

PREPARED BY:

JOLEEN MOBLEY

Environmental Scientist

Environmental Health Risk Assessment

Volen Mobles

Program

APPROVED BY:

DAVID L. DAUGHDRILL

Program Manager

Environmental Health Risk Assessment

Hull

STAFFORD D.F.R. COAKLE

Environmental Engineer

Environmental Health Risk Assessment

Program

APPENDIX A
REFERENCES

- 1. U.S. Army (1994). Technical Manual, Army Ammunition Data Sheets for Small Caliber Ammunition. TM-43-0001-27.
- 2. U.S. Army (1989). Field Manual, M16A1 and M16A2 Rifle Marksmanship, FM 23-9.
- 3. U.S. Army. Email communication between Ms. Tamera Clark-Rush, AEC, and Ms. Hsieng-Ye Chang, USACHPPM. Subject: Electronic copy of Firing Point Emission Study Series 3 Emission Factors, 16 August 2000.
- 4. USACHPPM (Aug 2000). Ambient Air Quality Consultation NO. 43-EL-1485-00 Air Dispersion Modeling Evaluation For Military Munitions, Aberdeen Proving Ground, MD.
- 5. Bowman Environmental, Inc. (1999). *INPUFF2, Multiple Source Integrated Puff Model*, Version 4.1.
- 6. Title 40, Code of Federal Regulations, Part 68 (40 CFR 68), Chemical Accident Prevention Provisions, 1 July 1998.
- 7. U.S. Army. Email communication between Ms. Tamera Clark-Rush, AEC, and Ms. Hsieng-Ye Chang, USACHPPM, 19 August 1999.
- 8. Army Training Evaluation Protocol (ARTEP) 7-20-MTP, *Mission Training Plan for the Infantry Battalion*.
- 9. EPA (April 2000). Region 3 Risk Based Concentration (RBC) Tables. Available online at www.epa.gov/reghwmd/risk/riskmenu.htm
- 10. EPA (Nov. 1999). Region 9 Preliminary Remediation Goals (PRG). Available online at www.epa.gov/region09/waste/sfund/prg/index.html
- 11.EPA (1999). Integrated Risk Information System. Available online at http://www.epa.gov/iris/
- 12. EPA. *National Ambient Air Quality Standards*. Available online at http://www.epa.gov/ airprogm/airs/criteria.html
- 13. Total Petroleum Hydrocarbon Criteria Working Group (1997). Development of Fraction Specific Reference Doses (RfDs) and Reference Concentrations (RfCs) for Total Petroleum Hydrocarbons (TPH), Volume 4. Amherst Scientific Publishers. Amherst, MA.
- 14. Total Petroleum Hydrocarbon Criteria Working Group (1997). *Development of Fraction Specific Reference Doses (RfDs) and Reference Concentrations (RfCs) for Total Petroleum Hydrocarbons (TPH)*, Volume 4. Amherst Scientific Publishers. Amherst, MA.

- 15. Manahan, Stanley (1994). *Environmental Chemistry*. Sixth edition. CRC Press, Inc. Boca Raton, FL.
- 16. U.S. Army (1996). Final Screening Risk Assessment for the Anniston Chemical Agent Disposal Facility at the Anniston Army Depot, Alabama. Revision No. 5. Prepared by the U.S. Army Center for Health Promotion and Preventive Medicine for the Program Manager for Chemical Demilitarization. Aberdeen Proving Ground, Maryland.
- 17. U.S. Army (1997). Final Screening Risk Assessment for the Pine Bluff Chemical Agent Disposal Facility at the Pine Bluff Arsenal, Arkansas. Revision No. 1. Prepared by the U.S. Army Center for Health Promotion and Preventive Medicine for the Program Manager for Chemical Demilitarization. Aberdeen Proving Ground, Maryland.
- 18. American Industrial Hygiene Association (AIHA) (1999). *Emergency Response Planning Guidelines*. AIHA Press, Fairfax, VA.
- 19. Department of Energy (1998). *Temporary Emergency Exposure Limits*, Revision 15. http://www.scapa.bnl.gov.
- 20. Agency for Toxic Substances and Disease Registry (1990). *Toxicological Profile for Acrolein*.

APPENDIX B AIR DISPERSION MODELING OUTPUT DATA

Table B-1: Air Modeling Output Data for the Cartridge, 5.56MM Blank, M200 (M16A1) - 100 meter location

	ACTION OF SALKS GREATHING BEST STORY		Mm. Black AMZ001(N/18 A/18/118) # 12 15 15 15 15 15 15 15 15 15 15 15 15 15	A BANIR (A) ME	W. P. H. To. Absen	Norwell Supplied And Supplied	金号 18 85 17 日 (5 g × 1 g)	
	Nominantilia		Carlo d'Ales A Company of the	The state of the s	A STATE OF THE PARTY OF THE PAR		A PROPERTY AND A	(T. J.
				and the state of t	No. of Contract of	Petrocular industrial		Seconds
	NAME OF STREET	5		14 ((%)) FA	10 FEB 1-10 Z		ROTE OF THE TOTAL PROPERTY.	0/m2/((8/8)); 16
からない こうしょう いんかん かんかん かんしょう かんしょう かんしょう かんしょう かんかん かんかん かんかん かんかん かんかん かんかん かんかん かん	· · · · · · · · · · · · · · · · · · ·	T. LANCELIN	HOTTOBIR SECTES	THE REPORT OF THE PARTY OF THE	SULPRAINT IN		FIRST SERVICE	100.00
	を重要を書いるので	10.14年の日本ではかいる	W. HANTONIA SAL	I V. SWELFER				144
					74,000,035			
				Sipels hip was				
								A CONTRACTOR
. K. Gombound	(Contained live							(g/ilem)/sec
Acid Gases in the state of the	The second second					A THE PROPERTY OF THE PARTY OF	The state of the s	State Control of the
Hydrogen Fluoride	2.30E-01	2.30E-01	2.20E-01	QN	QN	QN	ON	CN
Hydrogen Chloride	2.20E-01	2.20E-01	2.10E-01	QN	QN	QN	Q.	QN
Hydrogen Bromide	2.20E-01	2.20E-01	2.10E-01	QN	ND	QN	QN	9
Nitric Acid	5.80E-01	6.20E-01	2.10E-01	3.34E-07	3.90E-04	1.516E-04	1.539E-08	7.582E-05
Phosphoric Acid	2.20E-01	2.20E-01	2.10E-01	QN	QN	QN	QN	QN
Sulfuric Acid	3.20E-01	3.60E-01	2.10E-01	1.89E-07	2.21E-04	8.590E-05	8.719E-09	4.295E-05
Cyanido (117.4.)	A. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.	Section (Carlotter)	(4) 14 14 14 14 14 14 14 14 14 14 14 14 14		发表在第一	N. S. A. S.	企工。如此	S. 100 S. 100 S.
Particulate Cyanide	3.40E-02	2.10E-02	1.20E-02	1.54E-08	1.79E-05	6.974E-06	7.079E-10	3.487E-06
Hydrogen Cyanide	1.58E+00		1.30E-02	1.05E-06	1.22E-03	4.765E-04	4.836E-08	2.382E-04
Particulates were and the second	Day of Participal Co.	7	"我们不是我们不会	27. 4. 1. 2. 15. 15. 15. 15. 15. 15. 15. 15. 15. 15	*************************************	《公司》 (1) (1) (1) (1) (1) (1) (1) (1)		
Total Suspended Particulate	1.62E+01	1.08E+01	ΑN	7.54E-06	8.79E-03	3.421E-03		1.710E-03
Particulate Matter <10 microns		9.64E+00	NA	6.97E-06	8.13E-03	3.162E-03	3.210E-07	1.581E-03
Particulate Matter <2.5 microns	\bot	8.50E+00	AN	6.02E-06	7.02E-03	2.731E-03	2.771E-07	1.365E-03
Metals Water and Market and Marke	,á	(A)	S. INTERNATION	No. 21 12 4 19		THE RESERVE OF THE PERSON OF T	《公司》	Sale Without Keen
Aluminum	3.29E-01	3.67E-01	5.61E-02	1.94E-07	2.26E-04	8.798E-05	8.930E-09	4.399E-05
Antimony	9.96E-01	1.93E+00	1.51E-01	7.36E-07	8.58E-04	3.337E-04	3.387E-08	1.669E-04
Arsenic	1.33E-02	1.34E-02	1.40E-02	QN	ND	QN	QN	QN
Barium	7.31E-01	7.10E-01	5.61E-02	4.02E-07	4.68E-04	1.821E-04	1.849E-08	9.107E-05
Beryillum	5.31E-02	5.36E-02	5.61E-02	Q	Q	QN	Q	QN
Cadmium	5.31E-02	5.36E-02	5.61E-02	ND	DN	QN	QN	QN
Calcium	1.98E-01	2.92E-01	1.03E-01	8.51E-08	9.92E-05	3.858E-05	3.916E-09	1.929E-05
Chromium	5.31E-02	5.36E-02	5.61E-02	ND	QN	QN	QN	QN
Cobalt	5.31E-02	5.36E-02	5.61E-02	QN	QN	QN	QN	QN
Copper	1.03E+00	4.45E-01	8.55E-02	3.70E-07	4.31E-04	1.678E-04	1.703E-08	8.389E-05
Lead	1.928+00	1.73E+00	7.68E-02	9.79E-07	1.14E-03	4.442E-04	4.508E-08	2.221E-04
Magnesium	5.31€-02	5.36E-02	5.61E-02	ND	QN	QN	QN	QN

B-2

		Ī	THE PARTY OF THE P					NO.
	nber of ite	₹	1.4 [129] (2.1] [1] [1] [1] [1] [1] [1] [1] [1] [1]	J. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.		release duration (1):	1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1	+ spuopas
38		Nej Explosive we	SIGNIF IN E. WADE	Alfemilloso, His		Uhiticoncamination((UC):	2:030E:04 g(td)((g(s)	व्याप् ((व्र(४)
	Contraction of	. SATO FILIS	g Trastikesults)		AND			The state of the s
7	1.8 Trian #15	. 运计图 较佳即	L. L. Elianos .	*Averade 31	AAABrabe			
	Measured .	Measured.	6. Measured	Yoursheds	FABISIEG **		Concentration.	rsuostance n. Emission Rate
	M. Actual	S. Mailian	Background	End \$35n	1,100 8 8 1 1	(djanis/liem)	(gräfts/m)	K(g/lielfi)/sac
	Confedicitions	Concentration	Concentration		100			
3	F. F. (mg/(m), 18.		11.21 (dig/dn/8).***	Kridibilkan	((AVENIADI)	***	CONC	TOTAL STATE
	5.31E-02	5.36E-02	5.61E-02	QN	NO	ON.		QN
	5.31E-02	5.36E-02	5.61E-02	QN	QN	ND	ND	ND
	1.33E-02	1.34E-02	1.40E-02	QN	QN	QN	QN	QN
_	5.31E-02	5.36E-02	5.61E-02	QN	Q	QN	QN	Q
	5.31E-02	5.36E-02	5.61E-02	9	Q	QN	Q	QN
	5.31E-02	5.36E-02	5.61E-02	S	QN	QN	QN	QN
	2.79E-01	1.59E-01	5.61E-02	1.22E-07	1.43E-04	5.552E-05	5.635E-09	2.776E-05
* 100	第1634 (A) (A) (A)	No. W. M. S. C. A.	于"沙袋水","	27.154.44.2007	新格门、北阳和	· · · · · · · · · · · · · · · · · · ·	7.1	TO MAKE THE
	9.83E-02	1.11E-01	1.23E-01		6.78E-05	2.638E-05		1.319E-05
	1.80E-01	1.80E-01	1.80E-01	S	QN	QN	QN	Q
	1.19E+00	1.19E+00	1.19E+00	QN	QN	QN	QN	QN
	2.29E-01	2.29E-01	2.29E-01	QN	QN	QN	QN	QN
	2.37E-01	2.37E-01	2.37E-01	QN	QN	QN	S	QN
	2.87E-01	2.87E-01	2.87E-01	2	QN	QN	QN	Q
	2.95E-01	2.95E-01	2.95E-01	Q.	QN	QN	QN	QN
	4.34E-01	4.34E-01	4.34E-01	QN	· QN	QN	QN	QN
	3.52E-01	3.52E-01	3.52E-01	QN	QN	QN	QN	QN
	3.52E-01	3.52E-01	3.52E-01	QN	QN	ON	QN	QN
	4.91E-01	4.91E-01	4.91E-01	QN	ND	QN	QN	QN
	4.10E-01	4.10E-01	4.10E-01	QN	QN	QN	QN	Q
2,5-Dimethylbenzaldehyde	4.10E-01	4.10E-01	4.10E-01	QN ON	ND	QN	QN	ON.
Hydrocarboring free parties and la	Section Sections				THE STATE OF THE S		影 ·特尔拉·维斯	
	4.34E+00	4.03E+00	1.37E+00	1.65E-06	1.92E-03	7.479E-04	7.592E-08	3.740E-04
	1.32E+00	1.07E+00	2.29E-02	6.66E-07	7.76E-04	3.019E-04	3.065E-08	1.510E-04
	7.90E-01	7.07E-01	2.13E-02	4.18E-07	4.87E-04	1.894E-04	1.923E-08	9.472E-05
	1.45E-01	1.21E-01	2.46E-02	7.41E-08	8.64E-05	3.362E-05	3.413E-09	1.681E-05
	2 225 04	FO 1100	00 477 0	1				

M200air print100.xls

11/27/00

Table B-1: Air Modeling Output Data for the Cartridge; 5.56MM Blank, M200 (M16A1) - 100 meter location

	All the sections of the sections of	The state of the Seattle of the State of the	nmuelenkenzookaajearirijedaken rik	MARATERINETER	经产品的	No se (Nonversit) A se	The party and I round	round
	Number of the		115/12/07/07/15/10	31/2011/10	124 0 03 11 5		LT. H. W. T. L. T. Z. BBconds	Beconds v
	できる。	Newscale	CONTRACTION (PD)	ग्री(बेक्स्सिक्शाहर	SKBISBEROVE,		(\$iB)); will bon account ((Big))?	B/m² ((8/8))
	S. Contraction of the Contractio	A STATESTIFIE	Office (LEWS DIVE)	A STATE OF THE STATE OF			CALL STREET, S	1997年
	"一个是是一个一个一个一个一个一个一个一个一个一个一个一个一个一个一个一个一个一		THE STATE OF THE S	如於鄉鄉	山水縣縣			8
		A Marchines	P-file and the con-	S. FABRICATION	S. A. Marine		South State of the	Substance
では、「大学」というには、「大学」というには、「いき、「大学」というには、「いき、「いき、「いき、「いき、「いき、「いき、「いき、「いき、「いき、「いき								Emission Rate
icombandi.								
Propane	3.61E-02	3.61E-02	3.61E-02	QN	ON	ND ON	ON	ND
Propyne	5.44E-02	4.00E-02	3.20E-02	2.63E-08	3.07E-05	1.195E-05	1.213E-09	5.976E-06
Isobutane	4.75E-02	4.75E-02	4.75E-02	QN	QN	QN	QN	QN
1-Butene/Isobutylene	9.41E-02	6.43E-02	4.59E-02	4.42E-08	5.16E-05	2.007E-05	2.037E-09	1.004E-05
1,3-Butadiene/butane	6.88E-02	6.88E-02	6.88E-02	QN	QN	QN	QN	QN
cls-butene	4.59E-02	4.59E-02	4.59E-02	QN	QN	QN	QN	QN
1-Butyne	4.59E-02	4.59E-02	4.59E-02	QN	QN	QN	QN	QN
trans-Butene	4.59E-02	4.59E-02	4.59E-02	ON	QN	QN	9	2
2-Butyne	4.42E-02	4.42E-02	4.42E-02	ON	QN	QN	Q	S
n-Pentane	5.90E-02	5.90E-02	5.90E-02	QN	QN	QN	QN	QN
n-Hexane	7.05E-02	1.16E-01	8.11E-02	2.42E-08	2.82E-05	1.096E-05	1.112E-09	5.480E-06
Dioxins and Furans I Comment	Programme and the second	1. C. 18 1. 1. 1.	10 Carlot 11 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	10000000000000000000000000000000000000	1100年110日本中国共和国共和国共和国共和国共和国共和国共和国共和国共和国共和国共和国共和国共和国	The second desired	1 年代 聖 學 大品
2378-TCDD	4.20E-09	4.65E-09	5.72E-09	QN	QN	ON	QN	ON
12378-PECDD	2.90E-09	3.45E-09	3.35E-09	QN	QN	ND	QN	QN
123478-HXCDD	1.96E-09	2.29E-09	2.22E-09	DN	QN	QN	QN	QN
123678-HXCDD	2.03E-09	2.34E-09	3.95E-09	ON	QN	QN	QN	QN
123789-HXCDD	6.39E-09	7.43E-09	7.30E-09	QN	QN	QN	QN	QN
1234678-HPCDD	4.83E-09	4.40E-09	9.89E-09	QN	QN	GN	QN	QN
OCDD	5.90E-08	6.69E-08	6.59E-08	2.14E-15	2.50E-12	9.716E-13	9.862E-17	4.858E-13
2378-TCDF	2.89E-09	3.68E-09	3.47E-09	QN	QN	QN	QN	QN
12378-PECDF	3.94E-09	4.61E-09	4.68E-09	Q	QN	QN	QN	QN
23478-PECDF	3.08E-09	3.92E-09	3.62E-09	QN	QN	QN	QV	QN
123478-HXCDF	2.20E-09	2.64E-09	5.11E-09	2	QN	QN	QV.	QN
123678-HXCDF	2.24E-09	2.71E-09	2.69E-09	QN	QN	QN	QN	QN
123789-HXCDF	2.36E-09	2.74E-09	2.74E-09	QN	QN	QN	QN	QN
234678-HXCDF	1.15E-09	1.40E-09	1.39E-09	QN	Q	ND	QN	QN
1234678-HPCDF	1.40E-09	1.63E-09	4.86E-09	QN	QN	QN	ON	QN

	The state of the s		TOTELENKI, MZ00, (M16A LIRILIE) NY VI	M16A1fRII(E)Y	A CARPORTER OF	No. of Founds(()) 🖓 🖰 🕦		Z punoi L
		No De L'ANDERE DE	Allanda Missian Control of the Contr	Thaire	00:1	(elease duration (())	5	seconds
2000年度により	Service Control	3	THE WASTER TO THE	1 11911 AIR 31626	KIND BE-04	Unit Concentiation (UC): !!	1 . 2.030E-04	g/th;/(g/s)
		Y TAITO FIGI	ig:T66(IRestille	1. S. C. S. L. W. S. L.	13 154 54			大学を表する
	·	Trial #25-		Average	AN AND AND A			
· · · · · · · · · · · · · · · · · · ·	Measured	Measured	Measured	Adilister	Adjusted.	Total Mass of Substances	Substance	
	THE PARTY OF THE P	A LEGISTRE						Emission Raid
Compound	Constitution.	Colicentration				(grams/lam)	(grams/m)	5.(g/(lem)/sec
State of the state	Logith blands a sa	(m8/HB) 7-1		(Ib//(km))				TR.
1234789-HPCDF	6.82E-10	8.17E-10	1.30E-09	QN	QN	QN	QN	CN
	3.20E-09	3.75E-09	5.07E-09	QN	QN	QN	QN	S
802	Line Street	HILL STREET		34. 允许就像	* 2 * 4	Mary Carlot Mary Comments		W. L. Sales S. Co.
Ammonia (NH3)	3.50E+00	3.50E+00	NA	ON	-	QN	4	CN
Carbon Dioxide (CO2)	4.59E+02	4.59E+02	NA	2.25E-04	2.63E-01	1.023E-01	-05	5.114E-02
Carbon Monoxide (CU)	5.64E+02	5.75E+02	NA NA	2.80E-04	3.26E-01	1.268E-01	1.288E-05	6.342E-02
Oxides of Nitrogen (NOx)	2.71E+01	2.58E+01	NA	1.30E-05	1.51E-02	5.893E-03	5.981E-07	2.946E-03
de (SO2)	2.62E-01	2.62E-01	NA	1.29E-07	1.50E-04	5.838E-05	5.926E-09	2.919E-05
Car of the Add to the		T. P. P. L.	STATE OF THE STATE	建设设置	17 May 18		大学等的	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Propene	1.89E-01	1.89E-01	1.72E-03	1.05E-07	1.22E-04	4.763E-05	4.834E-09	2.381E-05
Ulchiorodiflouromethane	2.47E-03	2.97E-03	2.97E-03	4.87E-11	5.67E-08	2.207E-08	2.240E-12	1.104E-08
Chlorodilluoromethane	3.54E-03	3.54E-03	3.54E-03	QN	ON	ON	QN	QN
Chloromothana	6.99E-03	6.99E-03	6.99E-03	Q	ND	QN	QN	QN
Vinyl Chlorida	1.03E-03	1.45E-03	1.03E-03	1.78E-10	2.08E-07	8.080E-08	8.201E-12	4.040E-08
1 3-Rutadiana	2.30E-03	2.55E-03	2.56E-03	QN I	Q	QN	QN	QN
Bromomethane	3.88E-03	3 88E 03	2.21E-03	2.61E-09	3.05E-06	1.185E-06	1.203E-10	5.927E-07
Chloroethane	2 64E-03	2.60E-03	3.00E-03	2 2	2	QN	QN	QN
Dichlorofluoromethane	4 21E-03	4.24E.03	4.04E-03		2	QN	QN	QN
Trichloroflouromethane	5 82E 02	1 EDE 03	4.215-03	ON CO	ON.	QN	QN	QN
Pentane	2.02E-03	1.09E-U3	1.09E-03	9.20E-11	1.07E-07	4.173E-08	4.236E-12	2.087E-08
Acrolein	2.02E-03	2.45E-03	2.90E-03		QN	QN	QN	QN
1 1-Dichlorethana	4 OFF 02	4.0517.00	Z.Z9E-U3	1.14E-07	1.33E-04	5.168E-05	5.245E-09	2.584E-05
Freon 113	4.03E-03	4.05E-03	4.05E-03	QN:	Q	ND	QN	QN
Acatona	7.00E-03	7.00E-U3	7.58E-U3	QN	Q	QN	QN	9
Methyl Iodide	5.40E-02	5.40E-UZ	2.85E-01	2	Q	ND	QN	QN
Carbon Disultida	3.0 IE-03	5.81E-03	5.81E-03	Q	Q	QN	QN	QN
Calbor Disumos	2.80E-02	3.43E-02	3.11E-03	1.57E-08	1.83E-05	7.127E-06	7.234E-10	3.563E-06

	Number of iter	**************************************	MEBERTANISON MAGATARIONA 1777 20 Tanah Kataharan Berharia membentani	AMERY TRUIDING	AND	Medical (I) (aprino 1) of the state of the s	AN DATE OF TOURING AND THE STATE OF THE STAT	Found C. F. Seconds F. S.
CHARLES OF BUILDING	+ MANAGE AND SECOND	A STATE OF THE PARTY OF THE PAR	4	The state of the s	Tolle Probagary		TO THE PARTY OF TH	112.6
		THE STATE OF THE S		Track in the contract	A SECTION OF SECTION	*		
7	The state of the	A LUBING	N Daily	Average	T. Walfield S.	SIGNICA	Substances	
							(Concentiation)	
Compound	Concential of	Son Sentanto					(drams)m)	(g/item)/sec
	2.69E-01	2.69E-01	1.68E-03	1.48E-07	1.73E-04	0.1015 (Carmon Carmon)	6 R21E-09	2 360E OF
3-Chloropropene	3.13E-03	3.13E-03	3.13E-03	QN	QN	QN	ND ON	ND ND
Methylene Chloride	1.98E-01	2.67E-01	1.18E-01	7.08E-08	8.25E-05	3.209E-05	3.257E-09	1 605F-05
tert-Butyl Alcohol	3.03E-03	3.03E-03	3.03E-03	QN	QN	QN	QN	QN
AcrylonItrile	6.94E-02	6.51E-02	2.17E-03	3.63E-08	4.23E-05	1.645E-05	1.670E-09	8.225E-06
trans-1,2-Dichloroethene	3.96E-03	3.96E-03	3.96E-03	Q	QN	QN	QN	QN
Methyl t-Butyl Ether	3.61E-03	3.61E-03	3.61E-03	Q	QN	ND	QN	QN
Hexane	4.58E-02	7.05E-01	1.73E-01	1.20E-07	1.40E-04	5.464E-05	5.546E-09	2.732E-05
1,1-Dichloroethane	3.97E-03	3.97E-03	3.97E-03	ND	QN	QN	QN	SN N
Vinyl Acetate	3.52E-03	3.52E-03	3.52E-03	QN	ND	ON	QN	QN.
cis-1,2-Dichloroethene	3.96E-03	3.96E-03	3.96E-03	QN	ND	QN	QN	QN.
2-Butanone	1.47E-03	1.77E-03	2.95E-03	8.98E-10	1.05E-06	4.075E-07	4.136E-11	2.037E-07
Ethyl Acetale	1.08E-02	1.44E-02	3.60E-03	6.98E-09	8.14E-06	3.166E-06	3.213E-10	1.583E-06
Methyl Acrylate	3.52E-03	3.52E-03	3.52E-03	Q	Q	ND	QN	QN
Chloroform	4.88E-03	4.88E-03	4.88E-03	Q	QN	ND	QN	QN
1,1,1-1 richioroethane	2.73E-03	5.46E-03	5.46E-03	Q	Q	QN	QN	QN
1.3 Dishlarathone	0.28E-03	6.29E-03	6.29E-03	QN	QN	QN	QN	QN
I,z-Dichiolemane	1.21E-02	1.21E-02	4.05E-03	6.73E-09	7.85E-06	3.055E-06	3.100E-10	1.527E-06
Delizerie	6.39E-01	6.07E-01	3.20E-03	3.46E-07	4.03E-04	1.568E-04	1.592E-08	7.840E-05
Isoociane	4.6/E-03	4.67E-03	4.67E-03	QN	QN	ND	QN	QN
reptane	4.10E-U3	4.10E-03	4.10E-03	QN	Q	QN	QN	Q
l richloroethane	4.88E-03	4.88E-03	4.88E-03	Q	S	QN	QN	QN
Etnyl Acrylate	4.09E-03	4.09E-03	4.09E-03	Q	QN	ND	QN	QN
i,z-Uichloropropane	4.62E-03	4.62E-03	4.62E-03	QN	QN	QN	QN	QN
Metnyl Methacrylate	4.09E-03	4.09E-03	4.09E-03	Q	Q	ON	QN	QN
Ulbromomethane	7.11E-03	7.11E-03	7.11E-03	QN	Q.	QN	QN	QN
I,4-Dioxane	3.60E-03	3.60E-03	3.60E-03	QN	QN	QN	ON	ND

	Combine Chil	tridge, 5.56 r	nm Blank, M200: (M16A1 Rifle)	A16A1 Rifle)	新教教教	(I) springs to following (I)	La Caraca Marie	round
	Number of items:	Trial #1A =>	Trial #2A=3	-Tri81#2A=>	-	-	2	2 seconds
	S. S		elght Michwi pe	r Item ((58:)'='	*18158E-0419	Unit Contentration (UC):	2.030E-04	g/m²/(g/s)
		\$2ATGFILIF	ng Test Regults!	第二十二十二十二十二十二十二十二十二十二十二十二十二十二十二十二十二十二十二十	1 2 2 2 2 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1	7 A		
	Phase.	计编数	MIRO	Avelage	* * Averabe			
	Measured	Measuled	Measured	Adjusted	- Adjusted	Total Mass of Substance	Substance	Substance
· · · · · · · · · · · · · · · · · · ·	Addual	Adulait	Background *	Emission	T.Emission			Emission Rate
Compound	Contentiation	Concern allon	Concentration	Cactor.				20 M
6		6.70E-03	6.70E-03	ON	ND	ND	ON	CN
4-Methyl-2-Pentanone	4.10E-03	3.69E-03	4.10E-03	2.01E-09	2.35E-06	9.129E-07	9.265E-11	4.564E-07
Toluene	9.05E-02	9.42E-02	3.77E-03	5.12E-08	5.97E-05	2.322E-05	2.357E-09	1.161E-05
Octane	4.67E-03	4.67E-03	4.67E-03	QN	QN	ND	QN	QN
trans-1,3-Dichloropropene	4.54E-03	4.54E-03	4.54E-03	Q	QN	ND	QN	QN
Ethyl Methacrylate	4.67E-03	4.67E-03	4.67E-03	Q	QN	QN	QN	QN
1,1,2-Trichloroethane	5.46E-03	5.46E-03	5.46E-03	Q	Q	QN	QN	QN
lertrachloroethene	6.78E-03	6.78E-03	6.78E-03	QN	ND	QN	QN	QN
2-Hexanone	4.10E-03	4.10E-03	4.10E-03	Q	QN	QN	QN	QN
Dibromochloromethane	8.52E-03	8.52E-03	8.52E-03	QN	QN	ND	QN	QN
1,2-Dibromoethane	7.68E-03	7.68E-03	7.68E-03	Q	ND	ND	QN	9
Chlorobenzene	4.60E-03	4.60E-03	4.60E-03	Q	ND	QN	Q	QN
1,1,1,2-Tetrachloroethane	6.87E-03	6.87E-03	6.87E-03	Q	QN	ND	QN	SP.
Ethylbenzene	3.47E-03	3.47E-03	1.74E-03	1.07E-09	1.25E-06	4.869E-07	4.942E-11	2.434E-07
m/p-Xylene	1.30E-02	1.30E-02	8.68E-03	2.96E-09	3.45E-06	1.342E-06	1.362E-10	6.710E-07
o-Xylene	8.68E-03	8.68E-03	8.68E-03	5.50E-10	6.41E-07	2.496E-07	2.533E-11	1.248E-07
Styrene	8.52E-03	8.52E-03	4.26E-03	4.73E-09	5.51E-06	2.143E-06	2.176E-10	1.072E-06
Bromotorm	1.03E-02	1.03E-02	1.03E-02	2	QN	ND	QN	QN
Cumene	4.92E-03	4.92E-03	4.92E-03	Q	QN	ND	QN	QN
1,1,2,2-1 etrachlorethane	6.87E-03	6.87E-03	6.87E-03	Q	S	ND	QN	QN
1,2,3-1 richioropropane	6.03E-03	6.03E-03	6.03E-03	Q	Q	ND	QN	QN
Bromobenzene	6.42E-03	6.42E-03	6.42E-03	Q	QN	ND	QN	Q
4-Ethyitoluene	2.46E-03	2.95E-03	1.97E-03	5.31E-10	6.19E-07	2.410E-07	2.446E-11	1.205E-07
1,3,5-17imetnylbenzene	1.9/E-03	1.47E-03	1.47E-03	2.32E-10	2.70E-07	1.052E-07	1.068E-11	5.260E-08
Aipna Metnyl Styrene	4.83E-03	4.83E-03	4.83E-03	2	QN	ND	QN	QN.
1,2,4-I rimetnylbenzene	4.92E-03	4.92E-03	4.92E-03	3.11E-10	3.63E-07	1.413E-07	1.434E-11	7.063E-08
1,3-Uichlorobenzene	6.01E-03	6.01E-03	6.01E-03	QN	QN	QN	QN	QN

11/27/00

		est sector Cathidgova (564m	mejenkywzecynya grafi	MOATERITEDA	CARRIED TO	Noxoffounder (1) The The Law	Parist San Maria	round
			SIGNOSTINISM POR		RATHER DESIGNATION IN		2 (4) (4) (4) (5)	Sedende:
からない 一般ない	11/2017年 65113		durasie Resillia.		N. Spirates			10 m 1 m 20 m 20 m 20 m 20 m 20 m 20 m 2
	A PRINTER	对这种种种的		THE RESIDENCE OF	Market (Ca			
	. weasured	A Marinistry	L Vestores	A Suggled		rotal Messionismest	Substance	Substance
	Actuality	Administra	Beensteiner				College March	Emilssion Rate
Comboding (Concentration (Rothern						CONC	ER.
1,4-Dichlorobenzene	6.01E-03	6.01E-03	6.01E-03	QN	QN	QN	QN	NO
Benzyl Chloride	5.18E-03	5.18E-03	5.18E-03	QN	QN	QN	ND	QN
1,2-Dichlorobenzene	6.01E-03	6.01E-03	6.01E-03	QN	QN	QN	QN	QN
Hexachlorethane	9.68E-03	9.68E-03	9.68E-03	QN	QN	QN	QN	QN
1,2,4-Trichlorobenzene	7.42E-03	7.42E-03	7.42E-03	Q	QN	QN	QN	QN
	1.07E-02	1.07E-02	1.07E-02	QN	QN	QN	QN	QN
tively Identified	Compounds (TICs)							
SVOCS	10 mm	1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1	经产品的条约	医外部分 化二十	Art mit of the	国际公司的基础的证据	W. 1. 1886	
N-nitrosodimethylamine	1.75E-02	1.78E-02	1.81E-02	QN	QN			QN
Bis(2-chloroethyl)ether	1.75E-02	1.78E-02	1.81E-02	QN	QN	QN	QN	Q.
Phenol	1.09E-02	9.43E-03	1.81E-02	5.63E-09	6.57E-06	2.555E-06	2.594E-10	1,278E-06
2-chlorophenol	1.75E-02	1.78E-02	1.81E-02	QN	QN	QN	QN	QN
1,3-dichlorobenzene	1.75E-02	1.78E-02	1.81E-02	QN	Q	QN	QN	QN.
1,4-dichlorobenzene	1.75E-02	1.78E-02	1.81E-02	QN	QN	QN	QN	QN
1,2-dichlorobenzene	1.75E-02	1.78E-02	1.81E-02	QN	QN	QN	QN	QN
Benzyl alconol	1.75E-02	1.78E-02	1.81E-02	QN	Q	QN	QN	QN
2 mothylphonol	1.75E-02	1.78E-02	1.81E-02	2	Q	QN	QN	ND
Hevsethoroethane	1.755-02	1.78E-02	1.81E-02	ON S	Q	QN	QN	QN
N nitrogo di a propulamina	1.735-02	1.785-02	1.81E-02	ON.	Q	QN	QN	QN
4-mothylphonol	1.755-02	1.785-02	1.81E-02	QN .	Q	QN	QN	QN
Nitrobonzono	1.735-02	1.78E-02	1.81E-02	ON	Q	QN	QN	QN
MINODELIZERIE	1.75E-02	1./8E-02	1.81E-02	QN	ND	QN	QN	QN
Isophorone	1.75E-02	1.78E-02	1.81E-02	QN	QN	QN	QN	QN
z-muopnenoi	1./5E-02	1.78E-02	1.81E-02	Q	QN	QN	QN	QN
Z,4-dimetnyiphenoi	1.75E-02	1.78E-02	1.81E-02	QN	Q	QN	QN	Q
2.4 dishlatesheed	1.75E-02	1.78E-02	1.81E-02	QN	QN	QN	QN	QN
z,4-alcnioropnenol	1.75E-02	1.78E-02	1.81E-02	QN	QN	QN	QN	QN

100 100 100 100 100 100 100 100 100 100		White Section is	Cartildgel 5/56-m	INIBIANK, M290 (MIGATIRINE) & 1	MGATERITED'S		No. of rounds (I)		rollind
Third The Control The Co		* Number of It	National Annual	Aloher N.E. W. rta	"Thai #24.55	100	release duration (0:	7	seconds
Comparison Com		1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1	The state of the s		Helling 7 - 3	FIRE SALE	텀	2.030E-04	g/m,/(g/s)
Conversion Con		15 A 17	ATC FILL		The same			7. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.	
Convenience		BU THEFT	T-18142	P. Cabaily	Average at	Average			
Conception Con		· Measured	. Measured	· - Measured.	Adjusted A	"Adlusted	Total Mass of Substance	Substance	Substance
Type Type <th< td=""><td></td><td></td><td></td><td></td><td></td><td>The second second</td><td>Emilied (T.</td><td>Concentration</td><td>Emission Rate</td></th<>						The second second	Emilied (T.	Concentration	Emission Rate
Table Tabl				Background:	Emission	Fillssion :		(grams/m³)	Y.(g/ilem)/sec
Table 1.75E-02 1.76E-02 1.81E-02 ND					(If ill am) &	OH ARENEWA		2000	-0
1,72E-02	richlorobenzene	1.75E-02	1.78E-02	1.81E-02	QN	ON	35 CO. C.	NO.	1
176E-02 178E-02 178E-02 181E-02 ND ND ND ND ND ND ND N	halene	1.72E-02	1.49E-02	1.81E-02		3.38E-08	1.315E-08	1 334F-12	R 573E 00
Independent 175E-02	roanlline	1.75E-02	1.78E-02	1.81E-02	QN	QN	QN	ON	ND ND
Pipend 1.75E-02 1.78E-02 1.81E-02 ND ND ND ND ND ND ND N	chlorobutadiene	1.75E-02	1.78E-02	1.81E-02	QN	QN	QN	CN	2 2
Pentadeline 1,75E-02 1,78E-02 1,81E-02 ND ND ND ND ND ND ND N	ro-3-methylphenol	1.75E-02	1.78E-02	1.81E-02	QN	ND	QN	QN	2
peniadlene 1,75E-02 1,78E-02 1,81E-02 ND ND ND anol 1,75E-02 1,78E-02 1,81E-02 ND ND ND ND anol 1,75E-02 1,78E-02 1,81E-02 ND ND ND ND ene 1,75E-02 1,78E-02 1,81E-02 ND ND ND ND e 1,75E-02 1,78E-02 1,81E-02 ND ND ND ND f 1,75E-02 1,78E-02 1,81E-02 ND ND ND ND f 1,75E-02 1,78E-02 1,81E-02 ND ND ND ND f 1,75E-02 1,78E-02	nylnaphthalene	1.75E-02	1.78E-02	1.81E-02	QN	ND	QN	QN	S
anol 1.75E-02 1.78E-02 1.81E-02 ND ND ND ND anol 1.75E-02 1.78E-02 1.81E-02 ND ND ND ND ene 1.75E-02 1.78E-02 1.81E-02 ND ND ND ND ene 1.75E-02 1.78E-02 1.81E-02 ND ND ND ND e 1.75E-02 1.78E-02 1.81E-02 ND ND ND ND s 1.75E-02 1.78E-02 1.81E-02 ND ND ND ND s 1.75E-02 1.78E-02 1.81E-02 ND ND ND ND s 1.75E-02 1.78E-02	hlorocyclopentadiene	1.75E-02	1.78E-02	1.81E-02	QN	QN	QN	QN	QN
ene 1,75E-02 1,78E-02 1,81E-02 NB Leb ND ND ND ND ene 1,75E-02 1,78E-02 1,81E-02 NB1-02 ND ND ND ND 1,75E-02 1,78E-02 1,81E-02 NB1E-02 ND ND ND ND 1,75E-02 1,78E-02 1,78E-02 1,81E-02 ND ND ND ND 1,75E-02 1,78E-02 1,81E-02 ND ND ND ND ND 1,75E-02 1,78E-02 1,81E-02 ND ND ND ND ND 1,75E-02 1,78E-02 1,81E-02 ND ND ND ND ND ND 3,51E-02 3,56E-02 1,81E-02 ND ND <td>richlorophenol</td> <td>1.75E-02</td> <td>1.78E-02</td> <td>1.81E-02</td> <td>QN</td> <td>QN</td> <td>QN</td> <td>QN</td> <td>S</td>	richlorophenol	1.75E-02	1.78E-02	1.81E-02	QN	QN	QN	QN	S
ene 1,75E-02 1,78E-02 1,81E-02 ND	richlorophenol	1.75E-02	1.78E-02	1.81E-02	QV	QN	QN	QN	S
e 1.75E-02 1.78E-02 1.81E-02 ND ND ND ND e 1.75E-02 1.78E-02 1.81E-02 ND ND ND ND 9 1.75E-02 1.78E-02 1.81E-02 ND ND ND ND 9 1.75E-02 1.78E-02 1.81E-02 ND ND ND ND 1.75E-02 1.78E-02 1.81E-02 ND ND ND ND 3.51E-02 3.56E-02 3.62E-02 ND ND ND ND 1.75E-02 1.78E-02 1.81E-02 ND ND ND ND	ronaphthalene	1.75E-02	1.78E-02	1.81E-02	QN	QN	QN	QN	QN
e 1.76E-02 1.78E-02 1.81E-02 ND ND ND ND 9 1.75E-02 1.78E-02 1.81E-02 ND ND ND ND 1.75E-02 1.78E-02 1.81E-02 ND ND ND ND 3.51E-02 3.56E-02 3.62E-02 3.62E-02 ND ND ND 1.75E-02 1.78E-02 3.62E-02 3.62E-02 ND ND ND 1.75E-02 1.78E-02 1.78E-02 1.81E-02 ND ND ND 1.75E-02 1.78E-02 1.81E-02 ND ND ND ND 1.75E-02	aniline	1.75E-02	1.78E-02	1.81E-02	QN	QN	QN	QN	QN
e 1.75E-02 1.78E-02 1.81E-02 ND	phthylene	1.75E-02	1.78E-02	1.81E-02	QN	QN	QN	QN	Q
3 1.75E-02 1.78E-02 1.81E-02 ND ND ND ND 3.51E-02 3.56E-02 3.62E-02 3.62E-02 ND ND ND ND 3.51E-02 3.56E-02 3.62E-02 ND ND ND ND 1.75E-02 1.78E-02 1.81E-02 ND ND ND ND 3.51E-02 3.56E-02 3.62E-02 ND ND ND ND 9 1.75E-02 1.78E-02 1.81E-02 ND ND ND ND 9 1.75E-02 1.78E-02 1.81E-02 ND ND ND ND 9 1.75E-02 1.78E-02 1.81E-02 ND ND ND ND 10 1.75E-02 1.78E-02 1.81E-02 ND ND ND ND 10 1.75E-02 1.78E-02 1.81E-02 ND ND ND ND 10 1.75E-02 1.78E-02 1.81E-02 ND	ylphthalate	1.75E-02	1.78E-02	1.81E-02	QN	ND	QN	QN	QN
1.75E-02 1.78E-02 1.81E-02 1.81E-02 ND ND ND ND ND 3.51E-02 3.56E-02 3.62E-02 ND ND ND ND ND 1.75E-02 1.78E-02 1.81E-02 ND ND ND ND ND 3.51E-02 1.78E-02 1.81E-02 ND ND ND ND ND 1.75E-02 1.78E-02 1.81E-02 ND ND ND ND ND henylether 1.75E-02 1.78E-02 1.81E-02 ND ND ND ND 1.75E-02 1.78E-02 1.81E-02 ND ND ND ND ND hylphenol 3.51E-02 3.65E-02 ND ND ND ND ND sylphenol 3.51E-02 1.78E-02 1.81E-02 ND ND ND ND hylphenol 3.51E-02 1.78E-02 1.81E-02 ND ND ND ND heny	ilfrotoluene	1.75E-02	1.78E-02	1.81E-02	QN	ND	QN	QN	QN
3.51E-02 3.56E-02 3.62E-02 ND ND ND ND 3.51E-02 3.56E-02 3.62E-02 ND ND ND ND 1.75E-02 1.78E-02 1.81E-02 NB ND ND ND 3.51E-02 1.78E-02 1.81E-02 NB ND ND ND henylether 1.75E-02 1.78E-02 1.81E-02 ND ND ND henylether 1.75E-02 1.78E-02 1.81E-02 ND ND ND nylphenol 3.51E-02 3.56E-02 3.62E-02 ND ND ND nylphenol 3.51E-02 3.56E-02 3.62E-02 ND ND ND hanjlehenol 3.51E-02 3.78E-02 1.81E-02 3.62E-02 ND ND ND hanjlehenol 3.51E-02 1.78E-02 1.81E-02 ND ND ND ND	pntnene	1.75E-02	1.78E-02	1.81E-02	QN	ND	QN	QN	Q
3.51E-02 3.5E-02 ND ND ND ND 1.75E-02 1.78E-02 1.81E-02 NB1E-02 ND ND ND ND 3.51E-02 1.78E-02 1.81E-02 ND ND ND ND 4.75E-02 1.78E-02 1.81E-02 ND ND ND ND henylether 1.75E-02 1.78E-02 1.81E-02 ND ND ND ND hylphenol 3.51E-02 3.56E-02 1.81E-02 ND ND ND ND hylphenol 3.51E-02 3.56E-02 1.81E-02 ND ND ND ND damine(1) 1.75E-02 1.78E-02 1.81E-02 ND ND ND ND henylether 1.75E-02 1.78E-02 1.81E-02 ND ND ND ND	aniline	3.51E-02	3.56E-02	3.62E-02	QN	QN	QN	QN	QN
Job Policy 1.75E-02 1.78E-02 1.81E-02 ND ND ND ND Jene 1.75E-02 1.78E-02 1.81E-02 ND ND ND ND Jephenylether 1.75E-02 1.78E-02 1.81E-02 ND ND ND ND Jebenylether 1.75E-02 1.78E-02 1.81E-02 ND ND ND ND Methylphenol 3.51E-02 3.56E-02 3.62E-02 ND ND ND ND Methylphenol 3.51E-02 1.78E-02 1.81E-02 ND ND ND ND Methylphenol 3.51E-02 1.78E-02 1.81E-02 ND ND ND ND Methylphenol 1.75E-02 1.78E-02 1.81E-02 ND ND ND ND	intoprierioi	3.51E-02	3.56E-02	3.62E-02	QN	QN	QN	QN	QN
J. SE-02 1.81E-02 ND ND ND ND 3.51E-02 3.56E-02 3.62E-02 NGE-02 NGE-02 NGE-02 ND ND ND ND yl-phenylether 1.75E-02 1.78E-02 1.81E-02 ND ND ND ND ate 1.75E-02 1.78E-02 1.81E-02 ND ND ND ND methylphenol 3.51E-02 3.56E-02 3.62E-02 ND ND ND ND nenylamine(1) 1.75E-02 1.78E-02 1.81E-02 ND ND ND ND nenylamine(1) 1.75E-02 1.78E-02 1.81E-02 ND ND ND ND	itologian	1./5E-02	1.78E-02	1.81E-02	QN	QN	ND	QN	Q
3:51E-02 3:55E-02 3:62E-02 ND ND ND ND yl-phenylether 1.75E-02 1.78E-02 1.81E-02 ND ND ND ND ate 1.75E-02 1.78E-02 1.81E-02 ND ND ND ND methylphenol 3.51E-02 3.56E-02 3.62E-02 ND ND ND ND nenylamine(1) 1.75E-02 1.78E-02 1.81E-02 ND ND ND ND nenylamine(1) 1.75E-02 1.78E-02 1.81E-02 ND ND ND ND	intolouene	1.75E-02	1./8E-02	1.81E-02	QN	ND	ND	QN	QN
yl-phenylether 1.75E-02 1.78E-02 1.81E-02 ND	prierroi	3.51E-02	3.56E-02	3.62E-02	QN	QN	QN	QN	QN
yi-phenylether 1.75E-02 1.78E-02 1.81E-02 ND ND ND ND ND ate 1.75E-02 1.78E-02 1.81E-02 ND ND ND ND ND methylphenol 3.51E-02 3.56E-02 3.62E-02 ND ND ND ND nenylamine(1) 1.75E-02 1.78E-02 1.81E-02 ND ND ND ND yl-phenylether 1.75E-02 1.78E-02 1.81E-02 ND ND ND ND	Je	1.75E-02	1.78E-02	1.81E-02	QN	ND	QN	Q	QN
ate 1.75E-02 1.78E-02 1.81E-02 ND ND </td <td>ropnenyi-pnenyiether</td> <td>1.75E-02</td> <td>1.78E-02</td> <td>1.81E-02</td> <td>QN</td> <td>ND</td> <td>QN</td> <td>QN</td> <td>QN</td>	ropnenyi-pnenyiether	1.75E-02	1.78E-02	1.81E-02	QN	ND	QN	QN	QN
3.51E-02 3.56E-02 3.62E-02 ND ND ND ND ND methylphenol 3.51E-02 3.56E-02 3.62E-02 ND ND ND ND nenylamine(1) 1.75E-02 1.78E-02 1.81E-02 ND ND ND ND nyl-phenylether 1.75E-02 1.78E-02 1.81E-02 ND ND ND ND	Iphthalate	1.75E-02	1.78E-02	1.81E-02	Q	ND	QN	QN	QN
3.51E-02 3.56E-02 3.62E-02 ND ND <td>aniine</td> <td>3.51E-02</td> <td>3.56E-02</td> <td>3.62E-02</td> <td>QN</td> <td>ND</td> <td>QN</td> <td>QV</td> <td>QN</td>	aniine	3.51E-02	3.56E-02	3.62E-02	QN	ND	QN	QV	QN
1.75E-02 1.78E-02 1.81E-02 ND ND ND ND ND ND 1.75E-02 1.78E-02 ND	nitro-z-metnyipnenoi	3.51E-02	3.56E-02	3.62E-02	Q	QN	QN	QN	QN
1.75E-UZ 1.78E-02 1.81E-02 ND ND ND ND	sodipnenyiamine(1)	1.75E-02	1.78E-02	1.81E-02	QN	QN	QN	QN	QN
	nophenyl-phenylether	1.75E-02	1.78E-02	1.81E-02	ON	DN	QN	QN	QN

N State of the sta	North	16.59-m	UDIBLADIKAM 2001 (MAGANIRUB) (ALIKATANIRUB) (ALIKATANIRUB) (MAGANIRUB) (MAGANI	ALLEANTRUIE), FI	Katabeoty Katabeoty	ARISTOTOTOTOTOTOTOTOTOTOTOTOTOTOTOTOTOTOTO	1. V 2. V 1. V 1. V 1. V 1. V 1. V 1. V	Speca (g/m²/(g/m²)
	A HUNGAN		Application of the state of the	A VOID SEED	WANTED ST		Subsidince.	Substance
24 25 25	Concentration ***(mg/m9)	50°			EARESTON TO THE PARTY OF THE PA		Solve Color	(g/llem)/sec
	1.75E-02	1.78E-02	1.81E-02	QN	QN	ND	QN	ND
	3.31E-02	3.56E-02	3.62E-02	Q	Q	ON	QN	QN
	1.755-02	1.78E-02	1.81E-02	QN	Q	ND	QN	QN
	1.75F-02	1.78E-02	1.81E-02	2	Q.	ON	QN	QN
	1.75E-02	1.78E-02	1.015-02	2 2	Q	QN	QN	QN
	1.75E-02	1.78F-02	1.01E-02	QN CN	2 2	QN	QN	QN
	1.75E-02	1 78F-02	1 815 02	2 2	2	QN	QN	QN
	1.75E-02	1.78E-02	1.81E-02	2 2	O S	ON Si	QN	QN
	1.75E-02	1.78E-02	1.81E-02	2 2	2 2	ON ON	Q	QN
	1.75E-02	1.78E-02	1.81E-02	QN	2 2	QN N		Q
	1.47E-02	6.23E-02	3.98E-02	1.59E-09	1.85F-06	7 1985 07	7 200F 44	QN
	1.75E-02	1.78E-02	1.81E-02	QN	GN	ND ND	7.300E-11	3.599E-07
	1.75E-02	1.78E-02	1.81E-02	QN	2	S	2 2	ON S
- 1	1.75E-02	1.78E-02	1.81E-02	QN	QN	CX	2 2	
- 1	1.75E-02	1.78E-02	1.81E-02	QN	QN	CN	2 2	
	1.75E-02	1.78E-02	1.81E-02	QN	QN	2	2 2	2 2
- (1.75E-02	1.78E-02	1.81E-02	QN	QN	QN	S	2 2
- 1	1.75E-02	1.78E-02	1.81E-02	Q	QN	CN	2 8	2 4
EII	SVOC Tentatively identified Compounds (TICs	17					2	ON.
33.0	S. S	The second second second		1. 1. 3. 1.81、 4.8	3.12. O. S.	日本の教徒の中国教育会議会である。 第二十二十二十二十二十二十二十二十二十二十二十二十二十二十二十二十二十二十二十	Y W. W. B. W. S. S. S. S. S. S. S.	145.20
	1.47E-02	1.58E-02	1.18E-03	_	9.20E-06		3 632F-10	1 780E 06
	1.26E-03	1.09E-03	3.08E-05	6.36E-10	7.42E-07	2.887E-07	2 930F-11	1 4435 07
- 1	8.59E-05	6.58E-05	1.81E-05	4.22E-11	4.91E-08	1 912F-08	1 041E 12	1.443E-07
	2.63E-04	2.31E-04	2.89E-05	1.23E-10	1.43E-07	5 577E-08	1.341E-12	9.200E-09
- 1	2.80E-04	2.49E-04	5.25E-05	1.21E-10	1.41E-07	5.497E-08	3.000E-12	2.788E-08
- 1	3.86E-05	3.56E-05	4.16E-05	1.30E-13	1.52E-10	5.905F-11	5.37.9E-12 5.004E-14	2.748E-08
						1 1000:0	0.004E-10	Z.953E-11

	A Branches Comment	Cartridge de 556-m	m Blank, M200 (M16A1 RIIIe)	A16A1 Rille)	1	No. of rounds (I)	1	round
	Number of items:	ms: Trial#1A=>	C 4.229 P. 4	"Tribl #2A =>	¥ ≥ 3.30f € ≥ 3	release duration (t):	2 2	seconda
		Ner Explosing W	elghtanietwrper ilam (ibs.) =>	r (8m (168) =>	18,585.04	Unit Containtailphi(UC):	5'4 1,21030E:04	g/m ² /(g/s)
Tariffe (STAN STAN	ATCHILL	d Testifiel uitel		1 日本の		4	
	· 多数化加速	2. May 3. 4	A PROPERTY OF	TO SHE STORY	2 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4			
	THE STATE OF THE S	7 BU		AVERAGE A	Average.	Folal Massior Substance	L'SIIBSIAICE U	Silbelance
	Mensuled .	Measured	Weasuled a	- Adjusted s	Molinaled Street	TO THE PROPERTY OF THE PARTY OF	Concentration.	Emission Raid
	Valuacilian !!	Acilial - s.	Backgröund	Emission 4	Emission»	(gréms/lem)	Vi. (drams/m³)	· (d/ltem)/sec
4 Compound	Concentration	Contentitation		S. Factor	Falcion			
	. Kolyman.	A CHOMP AND	3	44 (mg/d), 44	(IB/ADENEW)	11.	**	Carle BRI
riuorantnene	2.45E-U4	2.13E-04		1.2/E-10	1.48E-07		5.864E-12	2.889E-08
Pyrene	4.03E-04	3.38E-04		2.06E-10	2.40E-07	9.334E-08	9.474E-12	4.667E-08
Benzo(a)anthracene	3.51E-04	3.56E-04	1.81E-05	1.96E-10	2.28E-07	8.883E-08	9.016E-12	4.441E-08
Chrysene	3.15E-04	3.02E-04	1.81E-05	1.71E-10	2.00E-07	7.774E-08	7.891E-12	3.887E-08
Benzo(b)fluoranthene	4.21E-04	4.09E-04	1.81E-05	2.30E-10	2.68E-07	1.044E-07	1.060E-11	5.219E-08
Benzo(k)fluoranthene	2.80E-04	2.67E-04	1.81E-05	1.52E-10	1.77E-07	6.886E-08	6.989E-12	3.443E-08
Benzo(e)pyrene	4.38E-04	4.27E-04	1.81E-05	2.40E-10	2.80E-07	1.088E-07	1.105E-11	5.442E-08
Benzo(a)pyrene	3.86E-04	3.74E-04	1.81E-05	2.11E-10	2.45E-07	9.551E-08	9.694E-12	4.775E-08
Indeno(1,2,3-cd)pyrene	6.48E-04	6.40E-04	1.81E-05	3.57E-10	4.17E-07	1.621E-07	1.646E-11	8.106E-08
Dibenz(a,h)anthracene	8.24E-05	7.83E-05	1.81E-05	4.46E-11	5.20E-08	2.021E-08	2.052E-12	1.011E-08
Benzo(g,h,i)perylene	7.71E-04	7.47E-04	1.81E-05	4.21E-10	4.91E-07	1.910E-07	1.939E-11	9.551E-08
Energetics and the contract	*************************************	THE REAL PROPERTY.	1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1	A WARRY	4. 公本にいる	本本 注目《福林》中,作品推动。	THE PROPERTY.	P. 15 18 18 18 18 18 18 18 18 18 18 18 18 18
Nitrobenzene	3.39E-03	3.37E-03	NA	QN	QN	QN	QN	QN
2-Nitrotoluene	3.39E-03	3.37E-03	NA	QN	QN	QN	QN	QN
3-Nitrotoluene	3.39E-03	3.37E-03	NA	QN	ND	QN	QN	QN
4-Nitrotoluene	3.39E-03	3.37E-03	NA	Q	Q	QN	QN	QN.
Nitroglycerine	3.39E-03	3.37E-03	NA	Q	Q	QN	QN	QN
1,3-Dinitrobenzene	3.39E-03	3.37E-03	NA NA	QN	Q	ND	GN	QN
2,6-Dinitrotoluene	3.39E-03	3.37E-03	NA	Q	Q Q	QN	QN	QN
2,4-Dinitrotoluene	3.39E-03	3.37E-03	NA	QN	ND	QN	QN	QN
1,3,5-Trinitrobenzene	3.39E-03	3.37E-03	NA	ON	ON	ND	ΩN	QN
2,4,6-Trinitrotoluene	3.39E-03	3.37E-03	NA	DN	ND	QN	QN	QN
RDX	3.39E-03	3.37E-03	NA	QN	QN	ND	QN	QN
4-Amino-2,6-Dinitrotoluene	3.39E-03	3.37E-03	NA	QN	Q.	ND	QN	QN
2-Amino-4,6-Dinitrotoluene	3.39E-03	3.37E-03	NA	QN	QN	ND	QN	QN
Tetryl	3.39E-03	3.37E-03	NA	QN	ND	QN	QN	QN
HMX	6.78E-03	6.74E-03	NA	QN	ND	ND	QN	QN

Composition	Trial And Control of C	Markingham Trinital Kreinsted Kelint Soncaninalish (markingh)	BIDINANIBANAM PAT BAID AC NEW BAID BOLL NEW BAID BOLL NOOMER HIR BILL NOOMER HIR BILL NOOMER HIR BILL NOOMER HIR BILL NOOMER HIR BILL				Suddlends Consomments (Consomments)	Brith (tgre) Substance Emission R. Contem)/se
r entaetytiniottetranitrate	6.78E-03	6.74E-03	NA	QN	QN	CN	ON	
Dibutyl phthalate	1.70E-01	1.68E-01	ΑN	CN	CN	24	QN.	
Dioctyl phthalate	1.70E-01	1 GRE_01	VIV		2	ON	Q.	2
Dinhenvlamine	0 405 00	1.005.0	4	Q.	QN	QN	QN	GN
cipilari di mino	0.40E-UZ	8.42E-02	AN N	2	CN	CN	4	

¹ATC = Aberdeen Test Center (for additional information on the data, refer to the Firing Point Emission Study) NA = Not Applicable ND = Not Detected

Table B-2: Air Modeling Output Data for the Cartridge, 5.56MM Blank, M200 (M16A1) - 200 meter location

	Number of teath of the second	SASS	TOTAL THE STATE OF	WARRACHEEN WATER	100 (00 (00 (00 (00 (00 (00 (00 (00 (00	Menturia de la composición del composición de la composición de la composición de la composición del composición de la c		au Vialon un general in a service de la company de la comp
Compound								Emission Kate Emission Kate
1. 2.6. 22.11					(Entrangle		CONCER	KAN IN OF
	-	2.30E-01			ON	ON	QN	NO NO
Hydrogen Chloride	2.20E-01	2.20E-01	2.10E-01	QN	QN	QN	QN	QN
Hydrogen Bromide	2.20E-01	2.20E-01	2.10E-01	ND	ND	QN	QN	NO.
Nitric Acid	5.80E-01	6.20E-01	2.10E-01	3.34E-07	3.90E-04	1.516E-04	2.949E-09	3.791E-05
Phosphoric Acid	2.20E-01	2.20E-01	2.10E-01	Q	QN	QN	QN	QN
21	3.20E-01	3.60E-01	2.10E-01	1.89E-07	2.21E-04	8.590E-05	1.670E-09	2.147E-05
Cyanide	· 1000000000000000000000000000000000000	A. J. W. W. Com.	H. K. O. K. W. L. O.	张明松 小鸟	山山北京的水本	未並任政治部為地區議開出。 由	S. C. S. L. S. C. L.	A STATE OF S
Particulate Cyanide	3.40E-02	2.10E-02	1.20E-02	1.54E-08	1.79E-05	6.974E-06	1.356E-10	1.744E-06
Hydrogen Cyanide	1.58E+00	2.20E+00	1.30E-02	1.05E-06	1.22E-03	4.765E-04	9.265E-09	1.191E-04
Particulates t t t.	ş	******************	A STATE OF THE	1. 社会的9.	1. 化二十二十二十二十二十二十二十二十二十二十二十二十二十二十二十二十二十二十二十	19年2年1月1日1日1日1日1日日	不是是一次	1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1
Total Suspended Particulate	1.62E+01	1.08E+01	, VA		8.79E-03		6.652E-08	8.552E-04
Particulate Matter <10 microns	1.53E+01	9.64E+00	AN	6.97E-06	8.13E-03	3.162E-03	6.149E-08	7.905E-04
Particulate Matter <2.5 microns		8.50E+00	NA	6.02E-06	7.02E-03	2.731E-03	5.310E-08	6.826E-04
Metels P. C. Collecte de	Town Marketon	1. L. C.	Bear All Call	A 66 44 68 14	ALCOURT DA	14. · · · · · · · · · · · · · · · · · · ·	STATE OF THE PARTY.	W. A. A. S. C. S. C. S. C.
Aluminum	3.29E-01	3.67E-01	5.61E-02		2.26E-04	8.798E-05	1.711E-09	2.200E-05
Antimony	9.96E-01	1.93E+00	1.51E-01	7.36E-07	8.58E-04	3.337E-04	6.489E-09	8.343E-05
Arsenic	1.33E-02	1.34E-02	1.40E-02	QN	ND	QN	QN	QN
Barium	7.31E-01	7.10E-01	5.61E-02	4.02E-07	4.68E-04	1.821E-04	3.542E-09	4.554E-05
Beryllium	5.31E-02	5.36E-02	5.61E-02	QN	QN	QN	QN	QN
Cadmium	5.31E-02	5.36E-02	5.61E-02			QN	QN	QN
Calcium	1.98E-01	2.92E-01	1.03E-01	8.51E-08	9.92E-05	3.858E-05	7.502E-10	9.646E-06
Chromium	5.31E-02	5.36E-02	5.61E-02	QN	Q	ND	QN	S
Cobalt	5.31E-02	5.36E-02	5.61E-02	QN	ON	QN	QN	QN
Copper	1.03E+00	4.45E-01	8.55E-02	3.70E-07	4.31E-04	1.678E-04	3.263E-09	4.195E-05
Lead	1.92E+00	1.73E+00	7.68E-02	9.79E-07	1.14E-03	4.442E-04	8.637E-09	1.110E-04
Magnesium	5.31E-02	5.36E-02	5.61E-02	QN	QN	QN	QN	QN
Manganese	5.31E-02	5.36E-02	5.61E-02	QN	QN	QN	QN	QN
Nickel	5.31E-02	5.36E-02	5.61E-02	QN	QN	QN	QN	QN

	Charles Barrer	Cartildog, 5,56-m	-	M/16A2 Rifle)	1.00	Netic (tonuds (I)	Philipse 8.41 round	punq
	Number of items:	Jmberof items: Trigi#1A =>	Prical Part Trial #2A =>		8.68E:04;		10.48.74.18.018	šečořidš, g/m²/(g(s))
	17. 数据	TANK I ATCIFIINDED						
Compound	Trial#1 Measured	≠Trial #2 Measured	22.00	Adjusted	Adjusted Adjusted	***		Substance
	. Control	K Aciual V		Emission	Emission H. A. F.V.	C. (djams(jejm)	(interest of the second	v. (g/ilem)/sec
Selenium	3	4	1.40E-02	QN	QN	NO ON	QN	ND ON
Silver	5.31E-02	5.36E-02	5.61E-02	QN	QN	QN	QN	QN
Thallium	5.31E-02	5.36E-02	5.61E-02	QN	QN	QN	QN	QN
Vanadium	5.31E-02	5.36E-02	5.61E-02	QN	QN	QN	QN	QN
Zinc	2.79E-01		5.61E-02	1.22E-07	1.43E-04	5.552E-05	1.080E-09	1.388E-05
TO:11:Girbony/SP: 北京,公司。	¥53	3		117 148277	"公外不利"	Charles and the second	医工作的	の名がない。
Formaldehyde	9.83E-02	1.11E-01	1.23E-01	5.81E-08	6.78E-05	2.638E-05		6.594E-06
Acetaldehyde	1.80E-01	1.80E-01	1.80E-01	Q Q	QN	QN	QN	QN
Acetone	1.19E+00	1.19E+00	1.19E+00	Q.	QN	QN	QN	QN
Acrolein	2.29E-01	2.29E-01	2.29E-01	Q	QN	QN	QN	QN
Proprionaldehyde	2.37E-01	2.37E-01	2.37E-01	QN	QN	QN	QN	QN
Crotonaldehyde	2.87E-01	2.87E-01	2.87E-01	QN	QN	QN	QN	QN
Butyraldehyde	2.95E-01	2.95E-01	2.95E-01	Q.	Q	ND	QN	QN
Benzaldehyde	4.34E-01	4.34E-01	4.34E-01	Q	QN	ON	QN	QN
Isovaleraldehyde	3.52E-01	3.52E-01	3.52E-01	Q.	QN	QN	QN	QN
Valeraldehyde	3.52E-01	3.52E-01	3.52E-01	QN	유	QN	QN	QN
o,m,p-Tolualdehyde	4.91E-01	4.91E-01	4.91E-01	QN	Q	ND	QN	QN
Hexaldehyde	4.10E-01	4.10E-01	4.10E-01	QN	Q	QN	· QN	QN
2,5-Dimethylbenzaldehyde	4.10E-01	4.10E-01	4.10E-01	QN	QN			ND
HVG/OCB1000156-846.45114-1444-16-16-16-16-16-16-16-16-16-16-16-16-16-	S. C.	BY 10 12 12 12 12 12 12 12 12 12 12 12 12 12	A	The state of the s	Sec. 10.00		4	Contractor and the second
Methane	4.34E+00	4.03E+00	1.37E+00	1.65E-06	1.92E-03	7.479E-04	1.454E-08	1.870E-04
Ethylene	1.32E+00	1.07E+00	2.29E-02	6.66E-07	7.76E-04	3.019E-04	5.871E-09	7.548E-05
Acetylene	7.90E-01	7.07E-01	2.13E-02	4.18E-07	4.87E-04	1.894E-04	3.684E-09	4.736E-05
Ethane	1.45E-01	1.21E-01	2.46E-02	7.41E-08	8.64E-05	3.362E-05	6.538E-10	8.406E-06
Propylene	3.32E-01	2.34E-01	3.44E-02	1.58E-07	1.84E-04	7.174E-05	1.395E-09	1.794E-05
Propane	3.61E-02	3.61E-02	3.61E-02	Q	ND	QN	QN	QN
Propyne	5.44E-02	4.00E-02	3.20E-02	2.63E-08	3.07E-05	1.195E-05	2.324E-10	2.988E-06
Isobutane	4.75E-02	4.75E-02	4.75E-02	QN	2	QN	ND	QN
1-Butene/Isobutylene	9.41E-02	6.43E-02	4.59E-02	4.42E-08	5.16E-05	2.007E-05	3.903E-10	5.018E-06

Table B-2: Air Modeling Output Data for the Cartridge, 5.56MM Blank, M200 (M16A1) - 200 meter location

		Kist Richt Koostindger 550 ru Number Silvemets Intellier Assa Establisher Vickeller ist	74 27 10 10 10 10 10 10 10 10 10 10 10 10 10	MUSARIENDA TOTORASASAS NEMINISTRAS		Light (Diagnothean Startonen Charlon (Orthone Startonen Startonen Startonen Startonen	1805 (W. 1805)	Counties (No. 1975)
A Compound				Adometra Adometra Enligion	ANCHES TO SERVICE TO S			P. Stuštance Emiššion Rike IK (driem) sek
১০ন জন্ম বিদ্যালয় জন্ম ক্রিকার বিদ্যালয় 1,3-Butadiene/butane	6.88	6.88E-02	6.88E-02	S (libinital) S	(depulpantery)		PRICONOTACE	Versite Indiana
cis-butene	4.59E-02	4.59E-02	4.59E-02	QN	QN	G Q	2 2	2 2
1-Butyne	4.59E-02	4.59E-02	4.59E-02	QN	QN	QN	2	2 2
trans-Butene	4.59E-02	4.59E-02	4.59E-02	QN	ND	QN	QN	Q
2-Butyne	4.42E-02	4.42E-02	4.42E-02	QN	QN	QN	QN	QN
n-Pentane	5.90E-02	5.90E-02	5.90E-02		QN	QN	9	QN
n-Hexane		1.16E-01	8.11E-02	2.42E-08	2.82E-05	1.096E-05	2.131E-10	2.740E-06
DIOXINSANG FURANS SERVER SERVE	13	10 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	16 公里出入事	4		The Act of the Control of the Contro	V. V. V. V. W. W.	5.000000000000000000000000000000000000
19378-DECON	4.20E-09	4.655-09	5.72E-09	QN :	2	QN		QN
12313-F ECDD	2.90E-09	3.45E-09	3.35E-09	QN	Q	QN	ON	2
123478-HACUD	1.96E-09	2.29E-09	2.22E-09	QN	ND	QN	S	ND ND
123678-HXCDD	2.03E-09	2.34E-09	3.95E-09	Q.	QN	QN	S	ND
123769-HACDU	6.39E-09	7.43E-09	7.30E-09	Q	Q	QN	Q	QN
IZ34878-HPCUU	4.83E-09	4.40E-09	9.89E-09			QN	QN	QN
2378-TCDE	3.90E-08	6.69E-08	6.59E-08	2.14E-15	2.50E-12	9.716E-13	1.889E-17	2.429E-13
12378 DECINE	2.89E-09	3.68E-09	3.47E-09	QN	Q	QN	QN	QN N
23478-PECDE	3.94E-09	4.61E-09	4.68E-09	Q !	Q	QN	QN	QN ON
123478-HXCDF	3.00E-09	3.92E-09	3.6ZE-09	2	Q .	QN	Q	QN
123678-HXCDF	2.20E-09	2.04E-09	2 695-09	Q S	2 2	Q	Q	QN
123789-HXCDF	2.36E-09	2 74E-09	2 74F-09		2 2	S S	Q .	Q.
234678-HXCDF	1 15F-09	1 40F-09	1 305 00	2 2		ON C	Q.	QN
1234678-HPCDF	1.40E-09	1 63E-09	4 RRF-09	ON ON	2 2	ON S	QN .	QN
1234789-HPCDF	6.82E-10	8.17E-10	1.30F-09	2			2	ON S
OCDF	3.20E-09	3.75E-09	5.07E-09	QN	CN	2 2		
Permanent Gases	1	1384P 2	1 C C . C . SAN 28. 155	51	AND A STANKE		UND THE STATE OF T	ON
Ammonia (NH3)	3.50E+00	3.50E+00	AN	QN	QN	ND	STANCE ON THE	ND ND
Carbon Dioxide (CO2)	4.59度+02	4.59E+02	AN	2.25E-04	2.63E-01	1.023E-01	1.989E-06	2.557E-02
Carbon Monoxide (CO)	5.64E+02	5.75E+02	NA	2.80E-04	3.26E-01	1.268E-01	2.467E-06	3.171E-02

	A Section of the second	Ask in the Property of the m		M16A2 Rifle)	· Beinder Riff	Nove of founds (I) and the control of the control o	A POSSESSION OF	round: 11.
	Number of len	VITTO THE WAY TO THE WAY THE WAY TO THE WAY THE WAY TO THE WAY TO THE WAY TO THE WAY TO THE WAY THE WAY TO THE	5 4	Trial#2A =>			Harvey Trees	seconds
		W SYNOSING W	D: [(Keim (loss)) #5	18.58E104	Unicetteentration Vers		g/m;/(g/g); -:
	1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1		ARESONE TO	对处理的现在分类的对于	《 第四十二年版》		A SOUTH PROPERTY OF	9
		7.20		Average	Avetage	In Trace of Collambases	Substance *	7 50
	9.5%		A Background	Adjusted	Emission			Emission Rate
C. Leaf, M. M. Market, S. C. St. St. St. St. St. St. St. St. St. St	in simplify.	1.1. (Mohili)	F. The office of S. S.	E. (telefolie do) La	(db/db/ NEW)	The state of the s	FA FOID NO.	
Oxides of Nitrogen (NOx)	2.71E+01	2.58E+01	AN	1.30E-05	1.51E-02	5.893E-03	1.146E-07	1.473E-03
	2.62E-01		NA	1.29E-07	1.50E-04	5.838E-05	1.135E-09	1.460E-05
VOCS WIRE SERVICE STATE	3 .1	Ž.	17.4 C. W. W. C. A.	松 建筑 W	10% 化器位储	ALL DESIGNATION OF THE STATE OF	S. P. S.	N. W. W. W. S.
Propere	1.89E-01	1.89E-01	1.72E-03	1.05E-07	1.22E-04	4.763E-05	9.261E-10	1.191E-05
Ulchiorodiffication	2.47E-03	2.97E-03	2.97E-03	4.87E-11	5.67E-08	2.207E-08	4.292E-13	5.518E-09
Critorodificormetrane	3.54E-03	3.54E-03	3.54E-03	Q	Q	ON	QN	Q.
Freon 114	6.99E-03	6.99E-03	6.99E-03	QN	QN	QN	QN	QN
Chloromethane	1.03E-03	1.45E-03	1.03E-03	1.78E-10	2.08E-07	8.080E-08	1.571E-12	2.020E-08
Vinyl Chloride	2.56E-03	2.56E-03	2.56E-03	Q	ND	QN	QN	QN
1,3-Butadiene	8.85E-03	4.42E-03	2.21E-03	2.61E-09	3.05E-06	1.185E-06	2.305E-11	2.964E-07
Bromomethane	3.88E-03	3.88E-03	3.88E-03	ND	ON	QN	QN	QN
Chloroethane	2.64E-03	2.64E-03	2.64E-03	ND	QN	QN	QN	Q
Ulchlorofluoromethane	4.21E-03	4.21E-03	4.21E-03	ND	DN	QN	Q	Q.
Irichloroflouromethane	5.62E-03	1.69E-03	1.69E-03	9.20E-11	1.07E-07	4.173E-08	8.115E-13	1.043E-08
Pentane	2.95E-03	2.95E-03	2.95E-03	ON	QN	QN	QN	QN.
Acrolein	2.04E-01	2.11E-01	2.29E-03	1.14E-07	1.33E-04	5.168E-05	1,005E-09	1.292E-05
i, i-Dichloremene	4.05E-03	4.05E-03	4.05E-03	Q	Q	QN	QN	QN
Acetone	7.00E-03	7.68E-03	7.68E-03	QN	Q S	Q	QN	QN
Methyl lodide	5 81F-03	5 81E-03	5.03E-01	2 2	2 2	ON	9	Q.
Carbon Disulfide	2.80E-02	3.43E-02	3.11E-03	1 57E-08	1 R3E-05	1 127E OB	UND 4 2967 46	ON I
Acetonitrile	2 GGE_01	2 GOE 01	1 805 03	4 405 07	1,001-00	1.127 E-00	1.300E-10	1./82E-U6
3-Chloronronene	3 13E 03	2 125 02	1.00E-U3	1.48E-U/	1.735-04	6.721E-05	1.307E-09	1.680E-05
Mothylpan Chlorida	3.13E-03	3.13E-03	3.13E-03	ON	Q.	ND	Q	QN
intensylette Chioride	1.98E-01	2.6/E-U1	1.18E-01	7.08E-08	8.25E-05	3.209E-05	6.241E-10	8.023E-06
Application	3.03E-03	3.03E-03	3.03E-03	Q	QN	QN	QN	QN
Acrylornime	5.94E-02	6.51E-02	2.17E-03	3.63E-08	4.23E-05	1.645E-05	3.199E-10	4.112E-06
Methyl Lautyl Ether	3.90E-03	3.90E-03	3.96E-03	ON	Q	QN	QN	QN
Hovens	3.0 IE-03	3.016-03	3.01E-03	2	Q	QN	QN	QN
Hovaile	4.00E-UZ	7.05E-01	1./3E-01	1.20E-07	1.40E-04	5.464E-05	1.062E-09	1.366E-05

	Number of the	Princentifesensisen Viembyajinaiman Vielesinosius (VV	ONE SECONOMICA STREET			VEX. AUDINIDATE ON	Design Result	TRACE MADICODES
			N. C. A. L. C.			(((((((((((((((((((((((((((((((((((((((00 1000	AMINING THE STATE OF
THE SECTION OF THE SE		戀						
							Concentration Articles (Inches	Emission Rate
1,1-Dichloroethane	3.97E-03	3.97F-03	3 07E 02	SECULATION SECTION SEC	III DE LINE IN LA LINE		A LOGINO LA	ER!
Vinyl Acetate	3.52E-03	3.52E-03	3.52E-03	2 2	ON S	QN	QN	ND
cis-1,2-Dichloroethene	3.96E-03	3.96E-03	3.96F-03	2 2	2 2	QV	QN	QN
2-Butanone	1.47E-03	1.77E-03	2.95F-03	8 OBE 10	A OFT OO	QN	QN	Q.
Ethyl Acetate	1.08E-02	1.44E-02	3.60E-03	6 98E-10	8 44E 08	4.075E-07	7.924E-12	1.019E-07
Methyl Acrylate	3.52E-03	3.52E-03	3.52E-03	CN	NA PE-00	3.166E-06	6.156E-11	7.915E-07
Chloroform	4.88E-03	4.88E-03	4.88E-03	QN	2 2	ON N	Q	QN
1,1,1-Trichloroethane	2.73E-03	5.46E-03	5.46E-03	S	2 2	ON I	Q	Q
Carbon Tetrachloride	6.29E-03	6.29E-03	6.29E-03	S	2 2	Q .	QN	QN
1,2-Dichlorethane	1.21E-02	1.21E-02	4.05F-03	8 73E 00	7 955	ON	QN	QN
Benzene	6.39E-01	6.07E-01	3.20F-03	3.46E-07	7.03E-00	3.055E-06	5.940E-11	7.637E-07
Isooctane	4.67E-03	4.67E-03	4 67F-03	S. TOE-O	4.03E-04	1.568E-04	3.049E-09	3.920E-05
Heptane	4.10E-03	4.10E-03	4 10F-03	2 2	2 5	QN	QN	QN
Trichloroethane	4.88E-03	4.88E-03	4 BRE-03	2 2	2	QN	QN	QN
Ethyl Acrylate	4.09E-03	4.09E-03	4 09F-03	2 2	2 2	QN	QN	QN
1,2-Dichloropropane	4.62E-03	4.62E-03	4.62E-03	2 2	2 2	QN	QN	QN
Methyl Methacrylate	4.09E-03	4.09E-03	4.09E-03	2 2	2 2	ON	Q	QN
Ulbromomethane	7.11E-03	7.11E-03	7.11E-03	Q			Q	QN
Romodichloromoth	3.60E-03	3.60E-03	3.60E-03	QN	200	CN CN	2 2	QN
4-Mathyl 2 Doctoring	6.70E-03	6.70E-03	6.70E-03	QN	Q.	CN	2 2	ON C
Tolione	4.10E-03	3.69E-03	4.10E-03	2.01E-09	2.35E-06	9.129F-07	1 77EC 11	ON O
outono.	9.05E-02	9.42E-02	3.77E-03	5.12E-08	5.97E-05	2 322E-06	1.773E-11	2.282E-07
Octane frame 1.3 Pickles	4.67E-03	4.67E-03	4.67E-03	2	GN	Z:3ZZE-03	4.516E-10	5.806E-06
Ethyl Mathan 14	4.54E-03	4.54E-03	4.54E-03	Q.	CN		ON S	QN
4.1.2 Taille	4.67E-03	4.67E-03	4.67E-03	Q	S	22	QN .	QN
1, 1, z-1 richloroethane	5.46E-03	5.46E-03	5.46E-03	Q	CN	ON ON	QN !:	ND
l enrachioroethene	6.78E-03	6.78E-03	6.78E-03	S	2 2		QN	Q
2-Hexanone	4.10E-03	4.10E-03	4.10E-03	2	2 2	ON CN	Q S	QN
Ulbromochloromethane	8.52E-03	8.52E-03	8.52E-03	QN	S	ON NO	QN .	QN
						UN	QN	QN

		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		0.00				-
	Section 1: Cardidae	m-ac.c. abbilue		Mil BAZ Kille)	数	No: Of rounds (I)		1 round sk
	Number of Medical	THE STATE OF THE S	GNUSINIEW PERREM	HER (185) ES	8.68E-045	release durauon (f): URIKGORICENIMIOR (UC):	717.77.78E.05	7 8E-05 g/m²/(g/s)*
	· · · · · · · · · · · · · · · · · · ·	A SAME AND A CONTROLLED OF THE SAME OF THE			The state of the s			
こう こうかん このはないできない かんしょ	Krainal #1	Tridi#2	7	.VAVerade 4	Average 2	K T. T. Claimass.	Substance	
Compound	Measinged.	Measings Freduction		Addition Efficien	Adjustieur Emilissido	iof Substantied:	Concentration	Emission Rate
Salar Sa					(New Age of the Control of the Contr		H. GONGS.	S. THER
1,2-Dibromoethane	7.68E-03	7.68E-03	7.68E-03	ON	ND		QN	
Chlorobenzene	4.60E-03	4.60E-03	4.60E-03	QN	ND	ND	QN	QN
1,1,1,2-Tetrachloroethane	6.87E-03	6.87E-03	6.87E-03	QN	ND	QN	QN	QN
Ethylbenzene	3.47E-03	3.47E-03	1.74E-03	1.07E-09	1.25E-06	4.869E-07	9.467E-12	1.217E-07
m/p-Xylene	1.30E-02	1.30E-02	8.68E-03	2.96E-09	3.45E-06	1.342E-06	2.609E-11	3.355E-07
o-Xylene	8.68E-03	8.68E-03	8.68E-03	5.50E-10	6.41E-07	2.496E-07	4.853E-12	6.239E-08
Styrene	8.52E-03	8.52E-03	4.26E-03	4.73E-09	5.51E-06	2.143E-06	4.168E-11	5.359E-07
Bromoform	1.03E-02	1.03E-02	1.03E-02	QN	ND	QN	QN	Q.
Cumene	4.92E-03	4.92E-03	4.92E-03	QN	ND	QN	ND	QN
1,1,2,2-Tetrachlorethane	6.87E-03	6.87E-03	6.87E-03	QN	ND	ND	ND	ON
1,2,3-Trichloropropane	6.03E-03	6.03E-03	6.03E-03	QN	ND	ND	ND	QN
Bromobenzene	6.42E-03	6.42E-03	6.42E-03	QN	ND	QN	ON	QN
4-Ethyltoluene	2.46E-03	2.95E-03	1.97E-03	5.31E-10	6.19E-07	2.410E-07	4.687E-12	6.026E-08
1,3,5-Trimethylbenzene	1.97E-03	1.47E-03	1.47E-03	2.32E-10	2.70E-07	1.052E-07	2.046E-12	2.630E-08
Alpha Methyl Styrene	4.83E-03	4.83E-03	4.83E-03	QN	ND	QN	ON	QN
1,2,4-Trimethylbenzene	4.92E-03	4.92E-03	4.92E-03	3.11E-10	3.63E-07	1.413E-07	2.747E-12	3.532E-08
1,3-Dichlorobenzene	6.01E-03	6.01E-03	6.01E-03	QN	ND	QN	ND	QN
1,4-Dichlorobenzene	6.01E-03	6.01E-03	6.01E-03	QN	ND	ND	ON	QN
Benzyl Chloride	5.18E-03	5.18E-03	5.18E-03	Q	QN	QN	ND	QN
1,2-Dichlorobenzene	6.01E-03	6.01E-03	6.01E-03	ΩN	ND	QN	ND	ON
Hexachlorethane	9.68E-03	9.68E-03	9.68E-03	QN	QN	ND	ND	ND
1,2,4-Trichlorobenzene	7.42E-03	7.42E-03	7.42E-03	QN	2	QN	QN	QN
Hexachlorobutadiene	1.07E-02	1.07E-02	1.07E-02	QN	Q	ND	QN	QN
VOC Tentatively Identified Compounds (TICs)	mpounds (TICs)	_						
SVOCER, NATIONAL STATES OF				THE STATE OF				THE PERSON NAMED IN THE PE
N-nitrosodimethylamine	1.75E-02		1.81E-02	ND	QN	QN	QN	ND
Bis(2-chloroethyl)ether	1.75E-02	1.78E-02	1.81E-02	QN		QN	QN	QN
Phenol	1.09E-02	9.43E-03	1.81E-02	5.63E-09	6.57E-06	2.555E-06	4.969E-11	6.389E-07
2-chlorophenol	1.75E-02	1.78E-02	1.81E-02	QN	Q	QN	QN	QN

M200air print.xls

	B. H. Marie M. W. B. D. G.	Con Mit. P. Gantidge A 5158-m	miBlanks/M200%	M/18A2/Rifle)	Christian Kirth	NEER PRINTER INCOME.	A A STATE OF THE S	100 mm (100 mm)
			Propressor		18 19 (D-187) (D-187)			
		Principal Internal					A 100 March 2010	A SAME CONTRACTOR AND A SAME AS
Bunodwood Asset								Filston Raie
								10.7(8/1/dfm)) sec. 51
1,3-dichlorobenzene	1.75E-02	1.78E-02	1.81E-02	A CIN		NO NO	NO. ST. PORTON	
1,4-dichlorobenzene	1.75E-02	1.78E-02	1.81E-02	QN	QN		2 2	
1,2-dichlorobenzene	1.75E-02	1.78E-02	1.81E-02	QN	2	Q	2 2	2 2
Benzyl alcohol	1.75E-02	1.78E-02	1.81E-02	QN	QN	QN	Q.	QN
Bis(2-chlorolsopropyl)ether	1.75E-02	1.78E-02	1.81E-02	QN	QN	QN	Q.	QN
2-methylphenol	1.75E-02	1.78E-02	1.81E-02	QN	QN	QN	Q	QN
Hexachloroethane	1.75E-02	1.78E-02	1.81E-02	QN	QN	QN	9	QN
N-nitroso-di-n-propylamine	1.75E-02	1.78E-02	1.81E-02	QN	QN	QN	SN SN	QN
4-methylphenol	1.75E-02	1.78E-02	1.81E-02	ON	QN	QN	P	QN.
Nitrobenzene	1.75E-02	1.78E-02	1.81E-02	QN	QN	QN	QN	QN
Isophorone	1.75E-02	1.78E-02	1.81E-02	QN	QN	QN	Q.	QN
2-nitrophenol	1.75E-02	1.78E-02	1.81E-02	ON	QN	QN	Q	2
Z,4-dimethylphenol	1.75E-02	1.78E-02	1.81E-02	Q	ND	QN	QN	ND
Bis(z-cnioroethoxy)methane	1.75E-02	1.78E-02	1.81E-02	QN O	QN	QN	QN	QN
z,4-dichiorophenoi	1.75E-02	1.78E-02	1.81E-02	Q	ND	QN	Q	QN
1, Z, 4-trichlorobenzene	1.75E-02	1.78E-02	1.81E-02		QN	QN	Q.	QN
Naphthalene	1.72E-02	1.49E-02	1.81E-02	2.90E-11	3.38E-08	1.315E-08	2.556E-13	3.286E-09
4-cilioroaniille	1.75E-02	1.78E-02	1.81E-02	2	Q	ND	QN	Q.
4 oblan 2 mathylaharal	1.755-02	1.78E-02	1.81E-02	9	QN	QN	ON	QN
2-mothylpaphthalone	1.75E-02	1.78E-02	1.81E-02	Q :	Q	QN	QN	QN
Hovoohlonguslanding	1.735-02	1.78E-UZ	1.81E-02	Q	QN	ND	Q	Q
2.4.6. trichlorophonal	1.75E-02	1.78E-02	1.81E-02	9	Q	QN	QN	Q
2.4.6 trichlosophenol	1.735-02	1.78E-UZ	1.81E-02	QN.	Q	ON	Q.	Q
z,4,3-menophenol	1.75E-02	1.78E-02	1.81E-02	Q.	QN	QN	S	QN
2-chlorotaphtmatene	1.75E-02	1.78E-02	1.81E-02	Q.	QN	ND	S	QN
A	1.75E-02	1.78E-02	1.81E-02	QN	QN	QN	QN	QN
Acenaphinylene Dimothylabback	1.75E-02	1.78E-02	1.81E-02	QN	QN	QN	QN	QN
26 dicitate	1.75E-02	1 /8E-02	1.81E-02	QN	ND	ON	Q	QN
z,o-dinitiotolidene	1.75E-02	1.78E-02	1.81E-02	QN	QN	QN	QN	ON

		Cartridge LESSum	om: BlanksiM900s(Md842 Biffa)	AAABAD Billey.	The state of the s	The Section of the Name of the Section of the Secti	A Charles available to the control of the	
	Number of Heme	Trialitation	14. W. O. O. O. C.	4	The state of the s	Figure 11 Colors Sakes 193	1 C. O. W. C.	Olinoi
	2	Net Explosive Well	Iguleani Fiw. pet	liem (lbsl) 2	8,585,04	Uniticoncentration (UC)	(62477786)05	g/m²/(g/s)
	4.00 年 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	は、大きないない。ですべ		H-~	191- State Water			10.10
	1	AllChinding	CKesullewall	1				
pound	Measured	Mensured Mensured	Medsuren	Average Adjusted .	Addisted	of Substance Emiliad	Substance Concentration	Substance Emission Rate
	AGUE	Actual	EBREKGIOTH OF	Emilisaion	Emission		#Cocaman.	(g/liem)/sec
With a second control of the second control	和是(兩個/商)。本	(HB/MS) 4.1	* (months)	4. (tot/ritem).44	(16 /16 NEW)	. E . W.	MY GONGE X	W. LYER
Acenaphthene	1.75E-02	1.78E-02	1.81E-02	ON	QN		QN	QN
3-nitroaniline	3.51E-02	3.56E-02	3.62E-02	ON	QN	QN	QN	QN
2,4-dinitrophenol	3.51E-02	3.56E-02	3.62E-02	ON	QN	QN	QN	QN
Dibenzofuran	1.75E-02	1.78E-02	1.81E-02	QN	QN	ON	QN	QN
2,4-dinitrotoluene	1.75E-02	1.78E-02	1.81E-02	QN	QN	QN	QN	QN
4-nitrophenol	3.51E-02	3.56E-02	3.62E-02	ON	QN	QN	QN	QN
Fluorene	1.75E-02	1.78E-02	1.81E-02	Q	QN O	ND	QN	QN
4-chlorophenyl-phenylether	1.75E-02	1.78E-02	1.81E-02	ND	QN	ND	QN	QN
Diethylphthalate	1.75E-02	1.78E-02	1.81E-02	Q	QN	ND	QN	ON
4-nitroaniline	3.51E-02	3.56E-02	3.62E-02	Q	ND	ND	ΩN	QN
4,6-dinitro-2-methylphenol	3.51E-02	3.56E-02	3.62E-02	QN	ND	ND	QN	Q.
N-nitrosodiphenylamine(1)	1.75E-02	1.78E-02	1.81E-02	QN	QN	ON	QN	QN
4-bromophenyl-phenylether	1.75E-02	1.78E-02	1.81E-02	Q	QN ON	ND	QN	ND
Hexachtorobenzene	1.75E-02	1.78E-02	1.81E-02	Q	QN	ND	QN	QN
Pentachlorophenol	3.51E-02	3.56E-02	3.62E-02	QN	ND	ON	ΩN	QN
Phenanthrene	1.75E-02	1.78E-02	1.81E-02	2	QN	ND	QΝ	QN
Anthracene	1.75E-02	1.78E-02	1.81E-02	Q	QN.	ND	QN	QN
Di-n-butylphthalate	1.75E-02	1.78E-02	1.81E-02	Q	Ö	ND	an	QN
Fluoranthene	1.75E-02	1.78E-02	1.81E-02	Q	Q	ND	QN	QN
Pyrene	1.75E-02	1.78E-02	1.81E-02	Q	ΩN	ND	QN	QN
Butylbenzylphthalate	1.75E-02	1.78E-02	1.81E-02	QN	QN	QN	QN	QN
Benzo(a)anthracene	1.75E-02	1.78E-02	1.81E-02	QN	ND	ND	QN	QN
Chrysene	1.75E-02	1.78E-02	1.81E-02	QN	ND	QN	QN	QV
3,3-dichlorobenzidine	1.75E-02	1.78E-02	1.81E-02	QN	QN	ON	QN	QN
Bis(2-ethylhexyl)phthalate	1.47E-02	6.23E-02	3.98E-02	1.59E-09	1.85E-06	7.198E-07	1.400E-11	1.799E-07
Di-n-octylphthalate	1.75E-02	1.78E-02	1.81E-02	QN	ND	ND	QN	ND
Benzo(b)fluoranthene	1.75E-02	1.78E-02	1.81E-02	QN	ND	ND	QN	QN
Benzo(k)fluoranthene	1.75E-02	1.78E-02	1.81E-02	Q	QN	ND	QN	QN
Benzo(a)pyrene	1.75E-02	1.78E-02	1.81E-02	Q.	ND	QN	ON	QN

	Number of the first	S. 78.44.0 Artitud (1859) berotitem kranta fransk ex	INTERNATION MARKET RITE THE TANK THE TA	(WIGAZIRIIB)) ITTEURZAS	f day of the same	ການເກັນເຂົ້າ ອີກໃນປະຊານອີໄຄ		round
		るさ	PARTITION OF THE PROPERTY OF THE PROPERTY OF THE PARTITION OF THE PARTITIO					(s/B)/(W/B
	Walter A			A Average A Addes Bear CERTISSION		A Substitution Market Commonwealth Commonweal	Substance Cooficeringlide	Substance Emission Rate
	1 75E-02	1 78E 02	(mg/h³)	(ib/lifem)	(IBM6, NEW)		INCONC!	ER
	1.75E-02	1 78F-02	1.01E-02	2 2	2 2	2 5	2	ND
	1.75E-02	1.78E-02	1.81E-02			ON CN	QN .	QN
Ifled Co	SVOC Tentatively Identified Compounds (TICs)					Q	ON.	QN
24 A		4. 13. 18. 18. 18. 18. 18. 18. 18. 18. 18. 18	1 1 1 1 1 1	() () () () () () () () () ()	さ しんかいかがか	(1) 10 10 10 10 10 10 10 10 10 10 10 10 10	V. 18 (1) 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.	
	1.47E-02	1.58E-02	1.18E-03	7.89E-09	9.20E-06	3.579E-06	6 959F-11	8 047E 07
	1.26E-03	1.09E-03	3.08E-05	6.36E-10	7.42E-07	2.887E-07	5.614E-12	7.217E-08
	8.59E-05	6.58E-05	1.81E-05	4.22E-11	4.91E-08	1.912E-08	3.718F-13	4 780E.00
	2.63E-04	2.31E-04	2.89E-05	1.23E-10	1.43E-07	5.577E-08	1.084E-12	1.794E-08
	2.80E-04	2.49E-04	5.25E-05	1.21E-10	1.41E-07	5,497E-08	1.069E-12	1.374E-08
	3.86E-05	3.56E-05	4.16E-05	1.30E-13	1.52E-10	5.905E-11	1.148E-15	1 476F-11
	2.45E-04	2.13E-04	1.81E-05	1.27E-10	1.48E-07	5.777E-08	1.123E-12	1.444E-08
	4.03E-04	3.38E-04	1.81E-05	2.06E-10	2.40E-07	9.334E-08	1.815E-12	2.334E-08
	3.51E-04	3.56E-04	1.81E-05	1.96E-10	2.28E-07	8.883E-08	1.727E-12	2.221E-08
	4 215-04	3.02E-04	1.81E-05	1./1E-10	2.00E-07	7.774E-08	1.512E-12	1.944E-08
	2 ROE 04	7 67E 04	1.81E-U5	2.30E-10	2.68E-07	1.044E-07	2.030E-12	2.610E-08
	4 38F-04	4.07E.04	1.61E-U5	1.52E-10	1.77E-07	6.886E-08	1.339E-12	1.721E-08
	3.86E-04	3.74F-04	1.01E-03	2.40E-10	2.80E-07	1.088E-07	2.116E-12	2.721E-08
	6.48E-04	6.40E-04	1.81E-05	3.57E-10	4 17E 07	9.33 IE-08	1.857E-12	2.388E-08
	8.24E-05	7.83E-05	1 81E-05	4 46E-11	5 20E 00	1.021E-07	3.153E-12	4.053E-08
	7 71E-04	7 47E.04	1 945 05	4.740	3.20E-00	Z.UZ1E-U8	3.931E-13	5.053E-09
1 2 2	1000 · 1000 · 1000	E PARTITION IN	1.015-03	4.21E-10	4.91E-U/	1.910E-07	3.714E-12	4.775E-08
	3.39E-03	3.37E-03	1	QN	CN	NO NO	100 M	The state of the s
	3.39E-03	3.37E-03	NA	QV	GN	CN CN		ON S
	3,39E-03	3.37E-03	NA	CN	S		ON S	ON!
	3.39€-03	3.37E-03	NA	S	2 2	ON ON	ON S	QN
	3.395-03	3.37E-03	NA	GN	S	ON CAN		GN.
	3.39E-03	3.37E-03	NA	CN	S		ON S	ON.
					21.	22.	NO	QN

M200air print.xls

	Cartridge 15/5/5/5/5/5/5/5/5/5/5/5/5/5/5/5/5/5/5/	Cartridge (5,58) in since the cartridge (5,59) in since the cartri	が:Blank, M200,(情を 429,122) 例ば 以長いと。 所容311(6人) 3.	MAGAZARIJE) Tribi Pove Iden (USI)	2.1.2.4.2.1.2.4.2.1.2.1.2.1.2.1.2.1.2.1.	No. of rounds (I) Fift 1847 I related to the second of the	0 18 28 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	rounds. Segunds: 100 gl/milling of the control of t
Composind 11111	Measured McActual At ((rig/m²)	Measifed Measifed Actifile (Highn)	Manager Pally (Manager Pally)	Addition Addition Endange	A Ver 609 A Ver 609 SERVICE STORY	O Substation Emitted	Substance Concentration Concentration Concentration	Substance (Eulistiporkale (Argulem) sec
2,6-Dinitrotoluene	3.39E-03	3.37E-03	A'A	QN	QN	QN	QN	QN
2,4-Dinitrotoluene	3.39E-03	3.37E-03	NA	QN	Q	ND	QN	QN
1,3,5-Trinitrobenzene	3.39E-03	3.37E-03	NA	QN	QN	QN	QN	S
2,4,6-Trinitrotoluene	3.39E-03	3.37E-03	NA	QN	QN	QN	QN	QN
RDX	3.39E-03	3.37E-03	NA	QN	ND	QN	QN	QN
4-Amino-2,6-Dinitrotoluene	3.39E-03	3.37E-03	NA	QN	QN	QN	QN	QN
2-Amino-4,6-Dinitrotoluene	3.39E-03	3.37E-03	NA	QN	QN	QN	QN	QN
Tetryl	3.39E-03	3.37E-03	NA	QN	QN	QN	QN	QN
HMX	6.78E-03	6.74E-03	NA	QN	ND	QN	QN	QN
Pentaerythritoltetranitrate	6.78E-03	6.74E-03	NA	QN	QN	ND	QN	QN
Dibutyl phthalate	1.70E-01	1.68E-01	NA	QN	QN	ON	QN	QN
Dioctyl phthalate	1.70E-01	1.68E-01	NA	QN	QN	QN	QN	QN
Diphenylamine	8.48E-02	8.42E-02	NA	QN	QN	QN	QN	QN
Footnotes:								

ATC = Aberdeen Test Center (for additional information on the data, refer to the Firing Point Emission Study)

NA = Not Applicable ND = Not Detected

APPENDIX C

HEALTH-BASED SCREENING LEVELS AND ACUTE TOXICITY VALUES

1000年後後後の一日の一日の日本の日本の日本の日本の日本の日本の日本の日本の日本の日本の日本の日本の日本	A STATE OF THE STA		For the Chro	For the Chronic Evaluation (HBSL)	on (HBSL)			For the Act	For the Acute Eveluation	4 T. V.	
T. Table Combounds T. T.			English Control						FABRICAL STATES	ON (AIV)	
Permanent Gases	स दशास्त्रभाग्नाम् ५६	BOAT WATER	K(clor no).v	Signature of the second	M(Corne)			A Long Const			
Ammonia (NH ₃)	7664-41-7	1.04E+02	20	104 20						1725	No. of the last
Carbon Dioxide (CO ₂)	124-38-9	-	2	85.401 NA	ဥ	1.04E+02	1.75E+04	1.75E+04	NA	Ш	1.75E+04
Carbon Monoxide (CO)	630-08-0	1.00E+04	26	2 2		ΑN			A A	_	5.40E+07
Oxides of Nitrogen (as NO)	10102-43-9		2 2			1.00E+04	2.30E+05	2.28E+05	AN	Ш	2 30E+05
Sulfur Dioxide (SO ₂)	7446-09-5		2 2	X < 2		1.00E+02	ΑN	_	NA	1	3.08F+04
Acid Gases		+	2	¥N.		8.00E+01	7.89E+02	7.86E+02	AN	ш	7.89E+02
Hydrogen fluoride	7664-39-3	AN AN		Q.				_			
Hydrogen chloride	7647-01-0	2.0	22	2 DRF+01	000	NA	1.60E+03	-	NA	Ш	1.60E+03
Hydrogen bromide	10035-10-6				2	2.08E+01	4.50E+03	_	AA	Ш	4.50E+03
Nitric Acid	7697-37-2			AN		NA	¥	9.93E+03	AA	Ţ	9.93E+03
Phosphoric acid	7664-38-2	1.04E+01	20	1 06E+01	0.00	NA	¥Z	2.58E+03	1.30E+03	A	1.30E+03
Sulfuric Acid	7664-93-9	NA A		NA	2	1.04E+01	AN	3.00E+03	Ϋ́	-	3.00F±03
Cyanide				2		NA	2.00E+03	2.00E+03	NA	ш	2.00E+03
Particulate Cyanide	57-12-5	¥		7 305 104							
Hydrogen Cyanide	74-90-8	3.13E+00	200	3 14E+00	nc	7.30E+01	NA NA	5.00E+03	¥	-	5 00F+03
Particulates			2	3.145400	JC	3.13E+00	¥.	5.17E+03	¥	-	5 17E+03
Total Suspended Particulate	12789-66-1	5.00E+01	5	V.							30.1
PM ₁₀		5.00E+01	2 6	2 2		5.00E+01	NA	AN	AN		AM
PM _{2.5}		1.50F+01	2 6	X .		5.00E+01	NA	NA	AN		AN
Metals			2	Y.		1.50E+01	NA	A N	¥		A N
Aluminum	7429-90-5	5 11E+00									2
Antimony	7440-36-0	NA	2	3.65E+00	nc	5.11E+00	Ϋ́	3.00E+04	AN		3 005 404
Arsenic	7440-38-2	4 47F-04	,	1.40E+00	nc	1.46E+00	¥	1.50E+03	¥.	- -	1 50E+04
Barium	7440-39-3	5.21E-01	2 8	4.13E-04	O	4.47E-04	Ā	3.00E+01	¥	-	3 00 0 0 0 0
Beryllium	7440-41-7	8.00E-04	2 0	7.455.04	DC .	5.21E-01	¥	1.50E+03	ΑA	-	1 50F+03
Cadmium	7440-43-9	1.07E-03		0 045 04	اد	8.00E-04	AN	5.00E+00	ΑN	-	5 00F+00
Calcium	7440-70-2	NA NA	,		٥	1.07E-03	¥	3.00E+01	¥.	-	3 DOF+01
Chromium	7440-47-3		,	1 525 04	O	AN	NA	3.00E+04	ΑN	-	3 00 5 704
Cobalt	7440-48-4	AN	\dagger	2 20E-04	O	1.53E-04	NA	1.50E+03	NA	-	1 50E+04
Copper	7440-50-8	AN		4.40E+02	2	2.20E+02	NA	6.00E+01	Αχ	-	8 00E + 04
Lead	7439-92-1	1.50F+00	\dagger	1.40E+UZ	20	1.46E+02		3.00E+03	AZ.	\dagger	3.00E+01
Magnesium	7439-95-4	NA	2	¥ S		1.50E+00	ΝA	1.50E+02	NA NA	1	1 50E+03
Manganese	7439-96-5	5.11F-02	٤	NA F 22F 02		NA		3.00E+04	¥	-	3.00E±02
	ľ		1	3.44E-U2	ည	5.11E-02	NA	3.00E+03	X X		3.00E+04
										-	3.UUE+U3

Control Cont				For the Chro	For the Chronic Evaluation (HBSL	on (HBSL)			For the Aci	Ita Evaluat	ION (ATV)	
NA 7.30E+01 nc 7.30E+01 nc 7.30E+01 nc 3.00E+02 NA NA 1.83E+01 nc 1.83E+01 nc 1.83E+01 NA 3.00E+02 NA NA 2.86E+01 nc 1.66E+01 nA 3.00E+02 NA NA 2.86E+01 nc 2.86E+01 NA 3.00E+02 NA 1.0A 2.86E+01 nc 2.86E+01 NA 3.00E+02 NA 1.10E+03 nc 1.10E+03 nc 1.10E+03 NA 3.00E+02 NA 1.28E-01 c 2.86E+02 nc 1.48E-01 1.23E+03 NA 3.6E+02 nc 3.06E+02 nc 1.60E+04 1.50E+03 NA 3.6E+02 nc 2.06E-02 nc 1.48E+03 nA 3.00E+03 NA 3.6E+02 nc 2.06E+02 nc 1.66E+02 nA 2.28E+03 NA 3.6E+02 nc 3.06E+03 nx	Control of the state of the sta		ARTERIOR OF THE STATE OF THE ST		Region S	Entipoint (corne)					TO THE STATE OF TH	
um 7782-49-2 NA 183E+01 nc 183E+01 NA 6.00E+02 NA mm 7440-28-0 NA 1.63E+01 nc 1.63E+01 NA 3.00E+02 NA mm 7440-62-8 NA 2.66E-01 nc 2.56E-01 NA 1.00E+02 NA dehyde 750-0 1.46E-01 c 2.56E-01 nc 2.56E-01 NA 1.00E+02 NA dehyde 750-0 1.46E-01 c 1.46E-01 nc 2.56E-01 NA 1.00E+02 NA dehyde 750-0 1.46E-01 c 1.36E-01 nc 1.06E-02 NA 1.00E+02 dehyde 750-0 8.73E-03 nc 3.06E+02 nc 3.06E-02 NA NA dehyde 6.764-1 3.05E-02 nc 3.06E-02 nc 3.06E-02 NA NA dehyde 6.762-1 1.06E-02 nc 2.06E-02 2.37E-03 NA	kel	7440-02-0	NA		7.30E+01	nc		NA	3.00E+03	NA	T 7.9	Ę.
TA40-22-4 NA 188E-01 nc 2.56E-01 NA 3.00E+02 NA 1.00E+03 NA 3.00E+02 NA 3.00E+02 NA 3.00E+02 NA 3.00E+03 NA 3.00E+03 NA 3.00E+03 NA 3.00E+03 NA 3.00E+04 3.00E+0	lenium	7782-49-2	A A		1.83E+01	nc	1.83E+01	A.	6.00E+02	A.		6.00E+02
1740-28-0 NA 2.56E-01 NA 3.00E-02 NA 1.50E-02 NA 1.50E-02 NA 1.50E-02 NA 1.50E-02 NA 1.50E-02 NA 1.50E-04 NA	/er	7740-22-4	ΝΑ		1.83E+01	nc	1.83E+01	NA NA	3.00E+02	N.	-	3 00F+02
Imm	allium	7440-28-0	NA		2.56E-01	ПС	2.56E-01	NA	3.00E+02	NA A	_	3 00E+02
Carbonyle 7440-66-6 NA 1.10E+03 no 1.10E+03 NA 3.00E+04 NA Gelyde 50-00-0 1.48E-01 c 1.38E-01 c 1.48E-01 1.23E+03 1.23E+03 NA delyde 75-07-0 8.73E-01 c 8.73E-01 c 8.73E-01 nA 2.75E+03 NA delyde 75-07-0 8.73E-01 c 8.73E-01 nA 2.75E+03 NA noraldehyde 177-02-8 2.09E-02 nC 2.09E-02 2.09E-02 NA 2.75E+03 NA noraldehyde 170-02-8 2.09E-02 nC 2.09E-02 2.30E-02 NA	nadium	7440-62-2	ΝΑ		2.56E+01	JC	2.56E+01	ΑN	1.50E+02	Y.		1 50F+02
Carbonyls Carb	v	7440-66-6	AN		1.10E+03	nc Du	1.10E+03	NA A	3.00E+04	NA	-	3 005 102
deflyde 50.0-0 1.48E-01 c 1.39E-01 c 1.48E-01 1.23E-03 INA deflyde 50.0-0 1.48E-01 c 8.13E-01 c 8.73E-01 I.80E-04 I.80E-04 deflyde 6 77-507-0 8.73E-01 c 8.13E-01 c 8.73E-01 I.80E-04 I.80E-04 I.80E-04 in origidalyde 170-30-3 2.09E-02 nc 2.09E-02 2.30E-02 2.30E-02 2.39E-06 NA origidalyde 170-30-3 NA Indeflyde 170-30-3 NA Indeflyde 100-52-7 3.65E+02 nc 3.05E-02 c 3.05E+02 I.70E-03 NA Indeflyde 100-52-7 3.65E+02 nc 3.05E-02 nc 3.05E-03 I.70E-03 NA Indeflyde 100-52-7 3.65E+02 nc 3.05E-02 nc 3.05E-03 I.72E-03 II.72E-03 III.72E-03 III.72E-	11 Carbonyls										-	2.001
dehyde 75-07-0 8.73E-01 c 8.73E-01 1.80E+04 NA ree 67-64-1 3.65E+02 nc 3.65E+02 nc 3.65E+02 NA 1.80E+02 NA onaldehyde 107-02-9 2.09E-02 nc 3.65E+02 nc 3.65E+02 NA 2.37E+06 NA onaldehyde 123-38-6 NA NA NA NA NA NA naldehyde 123-32-8 NA NA NA NA NA NA naldehyde 123-32-8 NA NA NA NA NA NA naldehyde 123-32-8 NA NA NA NA NA NA ndehyde 100-52-7 3.65E-02 NA NA NA NA NA ndehyde 100-52-7 3.65E-02 NA NA NA NA NA ndeldehyde 100-52-7 3.65E-02 NA NA NA NA NA	maldehyde	20-00-0	1.48E-01	၁	1.39E-01	ပ	1.48E-01	1.23E+03	1.23E+03	A	ш	1 23F+03
10	taldehyde	75-07-0	8.73E-01	υ	8.13E-01	υ	8.73E-01	1.80E+04	1.80E+04	¥	ш	1.80E+04
inition 107-02-8 2.09E-02 nc 2.09E-02 nc 2.09E-02 2.30E-02 NA	tone	67-64-1	3.65E+02	nc	3.65E+02	nc	3.65E+02	AN	2.37E+06	¥N	-	2.37F+06
123-33-6 NA	olein	107-02-8	2.09E-02	nc	2.08E-02	nc	2.09E-02	2.30E+02	2.29E+02	¥	Ш	2.30E+02
relaterlyde 4170-30-3 3.54E-03 c 3.30E-03 c 3.54E-03 5.72E+03 NA Idelryde 123-72-8 10A NA NA NA NA NA Idelryde 100-52-7 3.64E-02 nc 3.65E+02 nc 1.60E+02 nA NA </td <td>prionaldehyde</td> <td>123-38-6</td> <td>ΑN</td> <td></td> <td></td> <td></td> <td>AN</td> <td>ΝA</td> <td>7.50E+04</td> <td>NA</td> <td>L</td> <td>7.50E+04</td>	prionaldehyde	123-38-6	ΑN				AN	ΝA	7.50E+04	NA	L	7.50E+04
123-72-8 NA	tonaldehyde	4170-30-3	3.54E-03	ပ		ပ		5.72E+03	5.72E+03	AA	ш	5.72F+03
100-52-7 365E+02 NA	yraldehyde	123-72-8	AN		NA		NA	NA	7.38E+04	ΑN	L	7.38E+04
10-62-3 NA	zaidenyde	100-52-7	3.65E+02	nc	3.65E+02	nc	3.65E+02	NA	1.50E+04	NA	-	1.50E+04
10-62-3 NA	aleraldehyde	590-86-3	ΨN		ΝΑ		NA	AN	Ϋ́	AN		×N
1334-78-7 NA	raidenyde	110-62-3	¥		AN		ΝA	AN	ΑN	ΝA		ΑN
redifylgenzaldehyde 66-25-1 NA N	p-1 olualdenyde	1334-78-7	NA		ΑN		NA	NA	NA	ΑN		AN
NA	aldenyde	66-25-1	NA		ν V V		NA	ΑN	ΑĀ	ΑA		¥
ne 115-07-1 NA <	Uimethylbenzaldehyde	5779-94-2	ΑA		ΝΑ		NA	ΑN	ΑĀ	NA NA		N N
omethane 75-71-8 2.09E+02 nc 1.83E+02 nc 2.09E+02 NA 1.48E+07 NA NA 1.48E+07 NA NA 1.48E+07 NA 1.48E+07 NA 1.48E+07 NA 1.48E+07 NA 1.48E+07 NA 1.07E+00 NA 2.06E+05 NA 2.06E+05 NA 2.06E+05 NA 2.06E+05 NA 1.28E+04 NA 2.06E+05 NA 1.28E+04 NA 2.06E+05 NA 1.28E+04 NA 2.06E+05 NA 1.28E+04 NA 2.06E+05 NA 2.06E+06 NA 2.06E+06 NA 2.06E+06 </td <td>S</td> <td></td>	S											
romethane 75-71-8 2.09E+02 nc 1.83E+02 nc 2.09E+02 NA 1.48E+07 methane 75-45-6 5.11E+04 nc 5.11E+04 nA 4.41E+06 76-14-2 NA NA 2.10E+07 nA 2.10E+07 e 74-87-3 1.07E+00 c 1.07E+00 nA 2.06E+05 f 75-01-4 2.20E-02 c 2.20E-02 nA 1.28E+04 f 75-01-4 2.20E-02 c 2.20E-02 nA 1.28E+04 f 75-01-4 2.20E-02 c 2.20E-02 nA 1.28E+04 f 75-01-4 2.20E-03 c 2.20E-02 nA 1.28E+04 f 75-02-3 2.32E+00 nc 5.11E+00 nc 5.21E+00 nA 1.48E+05 methane 75-69-4 7.30E+02 nc 7.30E+02 nA 1.83E+04 107-02-8 2.09E-02 nc 7.30E+02 nc 7.30E+02	pene	115-07-1	Ϋ́		NA		Α¥	Ϋ́	¥	AN		AN
methane 75-45-6 5.11E+04 nc 5.11E+04 nc 5.11E+04 NA 4.41E+06 76-14-2 NA NA NA 2.10E+07 1.07E+00 NA 2.10E+07 6 74-87-3 1.07E+00 c 1.07E+00 NA 2.06E+05 75-01-4 2.20E-02 c 2.10E-02 c 2.20E-02 NA 1.28E+04 9 76-01-4 2.20E-02 c 2.10E-02 c 2.20E-02 NA 1.28E+04 9 74-83-9 5.21E+00 nc 5.11E+00 nc 5.21E+00 NA 2.8E+04 9 75-00-3 2.32E+00 nc 1.83E+02 nc 2.32E+00 NA 1.48E+07 methane 75-71-8 2.09E+02 nc 7.30E+02 nc 7.30E+02 NA 1.88E+06 109-66-0 NA NA NA 1.80E+06 nc 2.09E+02 NA 1.80E+06 107-02-8 2.09E-02 nc	Norodifluoromethane	75-71-8	2.09E+02	nc	1.83E+02	nc	2.09E+02	Ϋ́	1.48E+07		-	1.48E+07
o 74-14-2 NA NA NA 2.10E+07 e 74-87-3 1.07E+00 c 1.79E+00 c 1.07E+00 NA 2.06E+05 75-01-4 2.20E-02 c 2.10E-02 c 2.10E+02 c 2.20E-02 NA 1.28E+04 106-99-0 3.74E-03 c 3.48E-03 c 3.74E-03 c.20E+04 2.21E+04 e 74-83-9 5.21E+00 nc 5.11E+00 nc 5.21E+00 NA 5.82E+04 methane 75-71-8 2.09E+02 nc 1.83E+02 nc 2.09E+02 NA 1.48E+07 methane 75-69-4 7.30E+02 nc 7.30E+02 NA 1.80E+06 109-66-0 NA NA NA 1.80E+06 nc 2.09E+02 NA 1.80E+06 107-02-8 2.09E-02 nc 2.09E-02 NA 1.80E+06 nc 2.09E+02 2.30E+02 nc 107-02-8 2.09E-02 nc	prodifluoromethane	75-45-6	5.11E+04	nc	5.11E+04	nc	5.11E+04	NA	4.41E+06		-	4.41E+06
e 74-87-3 1.07E+00 c 1.79E+00 c 1.07E+00 NA 2.06E+05 75-01-4 2.20E-02 c 2.10E-02 c 2.20E-02 NA 1.28E+04 106-99-0 3.74E-03 c 3.74E-03 2.20E+04 2.21E+04 e 74-83-9 5.21E+00 nc 5.11E+00 NA 5.82E+04 methane 75-00-3 2.32E+00 nc 1.83E+02 nc 2.32E+00 NA 2.64E+06 methane 75-71-8 2.09E+02 nc 7.30E+02 nA 1.48E+07 na 109-66-0 NA 7.30E+02 nc 7.30E+02 nA 1.80E+06 na 107-02-8 2.09E-02 nc 2.09E-02 2.30E+02 na 1.80E+02 hene 75-35-4 5.21E+02 nc 5.21E+02 na 7.30E+02 na	Jn 114	76-14-2	NA		NA NA		NA	NA	2.10E+07		L	2.10E+07
of 3-01-4 2.20E-02 C 2.20E-02 NA 1.28E+04 106-99-0 3.74E-03 c 3.74E-03 2.20E+04 2.21E+04 e 74-83-9 5.21E+00 nc 5.11E+00 nc 5.21E+00 methane 75-00-3 2.32E+00 nc 1.83E+02 nc 2.32E+00 methane 75-01-8 2.09E+02 nc 1.83E+02 nc 2.09E+02 methane 75-69-4 7.30E+02 nc 7.30E+02 nc 7.30E+02 109-66-0 NA NA NA 1.80E+06 nc 107-02-8 2.09E-02 nc 2.09E-02 2.30E+02 nc 107-02-8 5.21E+02 nc 5.21E+02 nc 5.21E+02	oromethane	74-87-3	1.07E+00	υ	1.79E+00	O	1.07E+00	ΝΑ	2.06E+05		⊢	2.06E+05
106-99-0 3.74E-03 c 3.74E-03 c 3.74E-03 2.20E+04 2.21E+04 74-83-9 5.21E+00 nc 5.11E+00 nc 5.21E+00 NA 5.82E+04 75-00-3 2.32E+00 nc 1.83E+02 nc 2.32E+00 NA 2.64E+06 75-71-8 2.09E+02 nc 1.83E+02 nc 7.30E+02 NA 1.48E+07 109-66-0 NA NA NA 1.80E+06 NA 1.80E+06 107-02-8 2.09E-02 nc 2.09E-02 2.30E+02 2.29E+02 75-35-4 5.21E+02 nc 5.1E+02 NA 7.92E+04	o Cilioride	4-10-6/	2.20E-02	ပ	2.10E-02	O	2.20E-02	NA	1.28E+04		-	1.28E+04
/4-83-9 5.21E+00 nc 5.11E+00 nc 5.21E+00 NA 5.82E+04 75-00-3 2.32E+00 nc NA 2.32E+00 NA 2.64E+06 75-00-3 2.32E+00 nc 1.83E+02 nc 2.09E+02 NA 1.48E+07 75-69-4 7.30E+02 nc 7.30E+02 nc 7.30E+02 NA 2.81E+06 109-66-0 NA NA NA 1.80E+06 nc 107-02-8 2.09E-02 nc 2.09E-02 2.30E+02 2.29E+02 75-35-4 5.21E+02 nc 5.11E+02 nc 5.21E+02	butaglene	106-99-0	3.74E-03	υ	3.48E-03	O	3.74E-03	2.20E+04	2.21E+04		ш	2.20E+04
75-00-3 2.32E+00 nc NA 2.32E+00 NA 2.64E+06 75-71-8 2.09E+02 nc 1.83E+02 nc 2.09E+02 NA 1.48E+07 75-69-4 7.30E+02 nc 7.30E+02 nc 7.30E+02 NA 2.81E+06 109-66-0 NA NA NA 1.80E+06 nc 1.07-02-8 75-35-4 5.21E+02 nc 5.11E+02 nc 5.21E+02 NA 7.92E+04	nomemane	74-83-9	5.21E+00	2	5.11E+00	nc	5.21E+00		5.82E+04		-	5.82E+04
75-71-8 2.09E+02 nc 1.83E+02 nc 2.09E+02 NA 1.48E+07 75-69-4 7.30E+02 nc 7.30E+02 nc 7.30E+02 NA 2.81E+06 109-66-0 NA NA NA 1.80E+06 107-02-8 2.09E-02 nc 2.09E-02 2.30E+02 75-35-4 5.21E+02 nc 5.1E+02 NA 7.92E+04	proethane	75-00-3	2.32E+00	nc	A'A		2.32E+00		2.64E+06		_	2.64E+06
/3-59-4 /.30E+02 nc 7.30E+02 NA 2.81E+06 109-66-0 NA NA NA 1.80E+06 107-02-8 2.09E-02 nc 2.09E+02 2.30E+02 75-35-4 5.21E+02 nc 5.21E+02 NA 7.92E+04	Noronuoromethane	75-71-8	2.09E+02	ဥ	1.83E+02	nc	2.09E+02	NA	1.48E+07		F	1.48E+07
109-50-0 NA NA NA 1.80E+06 107-02-8 2.09E-02 nc 2.09E-02 2.30E+02 2.29E+02 2.29E+02 75-35-4 5.21E+02 nc 5.21E+02 nc 5.21E+02 NA 7.92E+04	filororingoringeriane	12-69-4	7.30E+0Z	20	7.30E+02	nc	7.30E+02	Y Y	2.81E+06		⊢	2.81E+06
75-35-4 5.21E+02 nc 5.11E+02 nc 5.21E+02 NA 7.92E+04	land	109-66-0	AN COL		NA		ΑN	¥	1.80E+06		⊢	1.80E+06
7.92E+04 5.21E+02 nc 5.1E+02 nc 5.21E+02 NA 7.92E+04	Dioblogothone	107-02-8	2.09E-02	20	2.08E-02	DE	2.09E-02	.30E+02	2.29E+02		ш	2.30E+02
	Olcanoloemene	75-35-4	5.21E+02	JC	5.11E+02	JC	5.21E+02	NA	7.92E+04		_	7.92E+04

Appendix C: Health-Based Screening Levels and Acute Toxicity Values

			For the Chronic Evaluation (HBS)	nic Evaluation	HRSI)						
	1 22 20	*Redlön9	A TOXIOINAL	RACIHETO	TABLE	The second second second		For the Acute Evaluation (ATV	te Evaluati	ion (ATV)	
Combounders of the							10.00			Source	ATV
Aceton 113	76-13-1	3.13E+04	nc	3.14E+04	nc nc	3 135+04	NA STATE	Ser Ser Se	Tring/W	LOCAL E	(m/Br/);
Mothy logida	67-64-1	3.65E+02	nc	3.65E+02	nc	3.65E+02		9.305+06		-	9.58E+06
Distilled	74-88-4	NA		AN		NA	145000	4.3/E+U6		-	2.37E+06
Carbon Disumde	75-15-0	7.30E+02	2	7.30E+02	nc C	7 30E±02	00004	1.435+05		ш	1.45E+05
Acetonitrile	75-05-8	6.20E+01	22	6.21E+01	2	8 20E+02	¥ S	3.11E+04		⊥	3.11E+04
3-Chloropropene	107-05-1	1.04E+00	2	AN	2	4 04E 100	AN L	1.01E+05		⊢	1.01E+05
Methylene Chloride	75-09-2	4.09E+00	O	3 79F+00	,	1.04E+00	9.39E+03	9.39E+03		Ш	9.39E+03
tert-Butyl Alcohol	75-65-0	AN		NA	د	4.09E+00	000969	6.94E+05		ш	6.96E+05
Acrylonitrile	107-13-1	2.83E-02	O	2.61E-02	,	NA 200 C	NA S	4.55E+05		⊢	4.55E+05
trans-1,2-Dichloroethene	156-60-5	7.30E+01	20	7.30F+01	, 6	7.90F : 04	21/00	2.17E+04		Ш	2.17E+04
Methyl t-Butyl Ether	1634-04-4	3.13E+03	20	3 13E+03	2 2	7.30E+01	¥.	4.95E+04		⊢	4.95E+04
Hexane	110-54-3	2.09E+02	2	2 08F±02	2 6	3.135+03	NA.	4.32E+05		⊢	4.32E+05
1,1-Dichloroethane	75-34-3	5.21E+02	2	5 11E+02	2 2	Z.09E+02	Ϋ́	5.28E+05		F	5.28E+05
Vinyl Acetate	108-05-4	2.09E+02	2	2 OBE + 02	2 1	5.21E+02	ΑN	1.21E+06		-	1.21E+06
cis-1,2-Dichloroethene	156-59-2	3.65E+01	2	3.65E+04	JIC S	2.09E+02	19150	1.76E+04		ш	1.92E+04
2-Butanone	78-93-3	1.04E+03	2	1 04E+03	JIC 3	3.65E+01	NA.	7.92E+05		-	7.92E+05
Ethyl Acetate	141-78-6	3.29E+03	2	3 205 . 02	2	1.04E+03	NA	8.85E+05		-	8.85F+05
Methyl Acrylate	96-33-3	1.10E+02	2 2	1 10E+02	2 2	3.29E+03	NA NA	1.44E+06		-	1.44E+06
Chloroform	67-66-3	8.35E-02		7 735 00	2	1.10E+02	ΑN	NA			AN
,1,1-Trichloroethane	71-55-6	1.04E+03		2 30F±02	0 8	8.35E-02	¥.	9.76E+03		-	9.76E+03
Carbon Tetrachloride	56-23-5	1.28E-01	-	1 18E-01	2 0	1.04E+03	1.94E+06	1.91E+06		ш	1.94E+06
,2-Dichloroethane	107-06-2	7.39E-02	C	G ARE OS	اد	1.28E-01	1.28E+05	1.26E+05		ш	1.28E+05
Benzene	71-43-2	2.49E-01	0	2 16E-01) ر	7.39E-02		8.08E+03		<u> </u>	8.08E+03
Isooctane (2,2,4-trimethylpen	540-84-1	ΑN		NA	د	Z.49E-01	Š	1.60E+05		ш	1.56E+05
Heptane	142-82-5	NA		Y AN		¥	¥.	3.50E+05		i-	3.50E+05
richloroethane	71-55-6	1.04E+03	nc	2 30F+03	0	NA 47.00	AN .	1.80E+06		 -	1.80E+06
Ethyl Acrylate	140-88-5	1.40E-01	1		2	1.04E+03	8	1.91E+06		ш	1.94E+06
1,2-Dichloropropane	78-87-5	9.89E-02		9 21E 02		1.40E-U1		6.14E+04		-	6.14E+04
Methyl Methacrylate	80-62-6	7.30E+02		7 305 102	اد	9.89E-02		5.08E+05		-	5.08E+05
Dibromomethane	74-95-3	3.65E+01		3 655+01	2 2	7.30E+02		4.09E+05		F	4.09E+05
1,4-Dioxane	123-91-1	6.11E-01	T	5 69E-01	2 0	3.65=+01		2.50E+05		⊢	2.50E+05
Bromodichloromethane	75-27-4	1.08E-01	T	1 01E-01	3 0	4.00F.01		9.00E+04		<u></u>	9.00E+04
4-Methyl-2-Pentanone	108-10-1	8.34E+01		7.30F±01	2 8	1.08E-01		4.00E+03		-	4.00E+03
loluene	108-88-3	4.02E+02		4 16F±02	2 2	0.34E+U1	-	3.07E+05		-	3.07E+05
Octane	111-65-9	NA		NA NA	2	4.02E+02	5	1.89E+05		Ш	1.88E+05
						S	¥Z	Y.	_		NA

			For the Chro	For the Chronic Evaluation (HBSL	on (HBSL)			For the Acute Evaluation (ATV)	ite Evaluat	Ion (ATV)	
Vin Compound	16/8				A (0.0)		9011		A SECTION OF THE PROPERTY OF T	188	N.W.
	10061-02-6		ပ	4.82E-02	υ	5.17E-02	NA	NA		TAY TO VERY	NA
Ethyl Methacrylate	97-63-2	3.29E+02	nc	3.29E+02	nc	3.29E+02	ΑN	¥.			AN
1,1,2-Trichloroethane	79-00-5	1.20E-01	၁	1.12E-01	υ	1.20E-01	NA	1.64E+05		_	1.64E+05
Tetrachloroethene	127-18-4	3.31E+00	U	3.13E+00	ပ	3.31E+00	NA	6.78E+05		-	6.78E+05
2-Hexanone	591-78-6	ΑΝ		5.11E+00	nc	5.11E+00	NA	4.09E+04		-	4.09E+04
Dibromochloromethane	124-48-1	8.00E-02	U	7.45E-02	ပ	8.00E-02	ΝA	6.00E+03		-	6.00E+03
1,2-Dibromoethane	106-93-4	8.73E-03	υ	8.24E-03	ပ	8.73E-03	NA	1.54E+05		-	1.54E+05
Chlorobenzene	108-90-7	6.21E+01	nc	6.21E+01	nc	6.21E+01	NA	1.38E+05		-	138F+05
1,1,1,2-Tetrachloroethane	630-20-6	2.60E-01	ပ	2.41E-01	U	2.60E-01	NA	5.15E+04		-	5.15E+04
Ethylbenzene	100-41-4	1.06E+03	nc	1.06E+03	nc	1.06E+03	NA	5.43E+05		_	5.43E+05
m&p-Xylene	108-38-3	7.30E+02	nc	7.30E+03	nc	7.30E+02	NA	6.51E+05		⊢	6.51E+05
o-Xylene	95-47-6	7.30E+02	nc	7.30E+03	nc	7.30E+02	NA	6.51E+05		F	651E+05
Styrene	100-42-5	1.06E+03	nc	1.04E+03	nc	1.06E+03	2.13E+05	2.13E+05		ш	2.13E+05
Вготогогт	75-25-2	1.75E+00	ပ	1.61E+00	C	1.75E+00	A N	6.20E+03		-	6.20E+03
Cumene	98-85-8	4.02E+02	ПС	4.02E+02	nc	4.02E+02	NA NA	2.46E+05		-	2.46E+05
1,1,2,2-l etrachloroethane	79-34-5	3.31E-02	O	3.13E-02	U	3.31E-02	NA	2.06E+04		1	2.06E+04
1,2,3-Trichloropropane	96-18-4	9.61E-04	O	3.13E-03	၁	9.61E-04	ΑA	6.03E+04		-	6.03E+04
Bromobenzene	108-86-1	1.04E+01	nc	NA		1.04E+01	NA	4.82E+04		-	4.82E+04
4-Ethyltoluene	622-96-8	NA		Y Y		NA	ΑN	1.25E+05		F	1.25E+05
1,3,5-Trimethylbenzene	108-67-8	6.21E+00	nc	6.21E+00	nc	6.21E+00	AN A	3.68E+05		-	3,68E+05
Alpha Methyl Styrene	98-83-9	2.56E+02	nc	2.56E+02	nc	2.56E+02	NA	AN			NA NA
1,2,4-I rimethylbenzene	95-63-6	6.21E+00	nc	6.21E+00	nc	6.21E+00	NA	1.80E+05		_	1.80E+05
1,3-Dichlorobenzene	541-73-1	3.29E+00	nc	3.29E+00	nc	3.29E+00	NA	3.61E+04		 -	3.61E+04
Portional Objected	100-40-7	3.06E-01	O	2.85E-01	υ	3.06E-01		6.61E+05		⊢	6.61E+05
Delizyi Criiolide	100-44-7	3.96E-02	O	3.68E-02	O	3.96E-02	5.20E+03	5.17E+03		ш	5.20E+03
i,z-Dichlorobenzene	95-50-1	2.09E+02	nc	3.29E+01	nc	2.09E+02	NA	3.01E+05		—	3.01E+05
Hexachlorethane	67-72-1	4.80E-01	υ	4.47E-01	ပ	4.80E-01	NA	2.90E+04		L	2.90E+04
1,z,4-i ricniorobenzene	120-82-1	2.08E+02	nc	2.08E+02	nc	2.08E+02	AN	3.71E+04		-	3.71E+04
Hexachiorobutadiene	87-68-3	8.73E-02	O	8.03E-02	v	8.73E-02	3.21E+04	3.20E+04		ш	3.21E+04
List of the Control o											
nyarocarbons											
Wethane	74-82-8	ΑΝ		¥		NA	ΝA	3.30E+06		F	3.30E+06
Ethylene	74-85-1	ΨZ.		NA.		NA	NA	4.60E+05		F	4.60E+05
Acetylette	7-99-7/	NA NA		NA		NA	AN	NA			NA

NA	For the Chronic Evaluation (HBSL) Covered Covered
NA NA NA NA NA NA NA NA	Townsky (Kingling) Kickensky Kingling
NA 3.78E+06 NA 2.79E+06 NA 8.62E+05 NA 6.87E+06 NA 1.72E+04 NA 1.72E+04 NA 1.72E+04 NA 1.72E+04 NA 1.72E+04 NA 1.80E+06 NA 1.80E+06 NA 1.80E+06 NA 1.80E+06 NA 1.80E+04	AN AN
NA 3.78E+06 T T NA 2.79E+06 T T NA 6.87E+06 T T NA 6.87E+06 T T NA 6.87E+06 NA T NA NA NA NA S.50E+03 T T S.50E+04 NA T T S.50E+04 NA S.50E+04 T T S.50E+04 NA	NA NA
NA 9.52E+05 T T NA 6.87E+06 NA T NA 6.87E+04 NA T NA NA NA NA NA NA S.25E+03 NA S.25E+04 NA T NA S.25E+04 NA T NA S.25E+04 NA T NA S.25E+04 NA S.25E+04 NA	NA
NA 6.87E+05	NA
03 2.20E+04 0.07E+06	1
NA 1.72E+04 NA T NA	c 3.48E-03 c
NA 1.72E+04 NA T NA 1.80E+06 NA T NA NA NA NA S.58E+05 T S S S S S S S S S S S S S S S S S S	A.A.
NA 1.72E+04 NA T NA T NA	NA
NA 1.82E+04 NA T NA T NA	NA
NA 1.80E+06 T 1.80E+06 T 1.80E+05 T 1.80E+05 T 1.80E+04 T T T 1.80E+04 T T T T T 1.80E+04 T T T T T T T T T	NA
22 NA 5.28E+05 T T S S S S S S S S S S S S S S S S S	1
NA 2.50E+05 T 2.50E+05 T 2.50E+04 T 2.50E+04 T 2.50E+04 T 2.50E+04 T 2.50E+04 T 2.50E+04 T 3.50E+04 T 2.50E+04 T 3.50E+04 T T 3.50E+04 T T 3.50E+04 T T 3.50E+04 T T T 3.50E+04 T T T T T T T T T	nc 2.08E+02 nc
NA 2.50E+03 T S S S S S S S S S	
NA 2.50E+03 T NA 5.85E+04 T NA 5.85E+04 T T NA 5.25E+03 T T NA 5.25E+03 T T NA 5.61E+05 T T T NA 5.63E+04 T T T NA 5.63E+04 T T T T T T T T T	c 1.23E-04 c
3 NA 3.85E+04 T T S.55E+03 T T S.55E+04 T T S.55E+04 T T S.55E+04 T T S.55E+05 T T S.55E+05 T T S.55E+05 T T S.55E+04 T T S.50E+04 T T T T T S.50E+04 T T T T T T T T T T T T T T T T T T T	5.69E-03
1 NA 5.25E+03 T T S S S S S S S S S S S S S S S S S	1
1 NA 3.01E+04 T T S S S S S S S S S S S S S S S S S	1
1 NA 6.61E+05 13 NA 5.53E+04 14 NA 6.99E+04 15 NA	
2 NA 3.01E+05 1 NA 5.53E+04 1 NA 6.99E+04 1 NA 2.00E+02 1 NA 2.00E+02 1 NA 1.51E+04 1 NA 2.83E+04 1 NA NA 1 NA NA NA NA 1 NA NA NA NA 1 NA	\downarrow
3 NA 5.53E+04 T T NA 6.99E+04 T T NA 2.90E+04 T T NA 2.00E+02 T NA	3.29E+01
1 NA 6.99E+04 T NA 2.90E+04 T NA 2.00E+02 T NA N	1.10E+03
2 NA NA NA T.86E+04 T T T NA 2.90E+04 T T T NA 2.93E+04 T T NA	1.83F+02
NA 2.90E+04 T T NA 2.00E+02 T T NA	4.47F-01
NA 2.00E+02 T T NA	
NA 1.51E+04 T T NA	
NA 1.51E+04 T T NA	1
NA 2.83E+04 T T NA	
NA N	NA
NA NA NA NA NA NA NA NA 3.00E+04 T T NA 7.86E+04 T	1
NA NA 3.00E+04 T NA 3.71E+04 T NA 7.86E+04 T	/.30E+01 nc
NA 3.00E+04 T NA 3.71E+04 T NA 7.86E+04 T	1
NA 3.71E+04 T NA 7.86E+04 T	1
NA 7.86E+04	2.08E+02 nc
T 1.86E+04	nc 3.29E+00 nc

			For the Chronic Evaluation (HBSL	nic Evaluatio	n (HBSL)			For the Acu	For the Acute Evaluation (ATV)	n (ATV)	
S. T. Combound	97 03	Region 9 P	Elokiely Elokiely Teegos		Toxicity Tradbout (c.br.hc.)						
4-chloroaniline	106-47-8	1.46E+01	nc	1.46E+01	nc	1.46E+01	ΝA	3.00E+04		T	3.00E+04
hexachlorobutadiene	87-68-3	8.62E-02	ပ	8.03E-02	C	8.62E-02	3.21E+04	3.20E+04		ш	3.21E+04
4-chloro-3-methylphenol	59-50-7	ΑN		AA		AN	NA	2.00E+04		-	2.00E+04
2-methylnaphthalene	91-57-6	ΑΝ		7.30E+01	nc	7.30E+01	NA	2.00E+04		⊢	2.00E+04
hexachlorocyclopentadiene	77-47-4	7.30E-02	nc	7.30E-02	nc	7.30E-02	NA	2.23E+02		⊢	2.23E+02
2,4,6-trichlorophenol	88-06-2	1.10E+02	nc	1.10E+02	nc	1.10E+02	NA	3.00E+04		_	3.00E+04
2,4,5-trichlorophenol	95-95-4	3.65E+02	nc	3.65E+02	nc	3.65E+02	NA	3.00E+04		Τ	3.00E+04
2-chloronaphthalene	91-58-7	2.92E+02	nc	2.92E+02	nc	2.92E+02	NA	6.00E+02		Τ	6.00E+02
2-nitroaniline	88-74-4	2.09E-01	nc	2.08E-01	nc	2.09E-01	NA	NA			NA
Acenaphthylene	208-96-8	ΑΝ		NA		NA	NA	2.00E+02		⊥	2.00E+02
dimethylphthalate	131-11-3	3.65E+04	nc	3.65E+04	nc	3.65E+04	NA	1.50E+04		⊢	1.50E+04
2,6-dinitrotoluene	606-20-2	3.65E+00	nc	3.65E+00	nc	3.65E+00	NA	6.00E+02		T	6.00E+02
acenaphthene	83-32-9	2.19E+02	nc	2.19E+02	nc	2.19E+02	NA	1.25E+03		_	1.25E+03
3-nitroaniline	99-09-2	ΑN		AN		NA	NA	NA			AN
2,4-dinitrophenol	51-28-5	7.30E+00	nc	7.30E+00	nc	7.30E+00	NA	7.50E+03		Τ	7.50E+03
dibenzofuran	132-64-9	1.46E+01	nc	1.46E+01	nc	1.46E+01	NA	NA			NA
2,4-dinitrotoluene	121-14-2	7.30E+00	nc	7.30E+00	nc	7.30E+00	NA	6.00E+02		Т	6.00E+02
4-nitrophenol	100-02-7	2.92E+01	nc	2.92E+01	nc	2.92E+01	NA	3.00E+04		_	3.00E+04
Fluorene	2-62-98	1.46E+02	nc	1.46E+02	nc	1.46E+02	¥.	7.50E+04		⊢	7.50E+04
4-chlorophenyl-phenylether	7005-72-3	NA		NA		NA	AA	NA			NA
diethylphthalate	84-66-2	2.92E+03	uc	2.92E+03	uc	2.92E+03	NA	1.50E+04		⊢	1.50E+04
4-nitroaniline	100-01-6	ΝΑ		NA		NA	NA	9.00E+03		⊢	9.00E+03
4,6-dinitro-2-methylphenol	534-52-1	NA		3.65E-01	nc	3.65E-01	Y V	5.00E+02		F	5.00E+02
n-nitrosodiphenylamine(1)	86-30-8	1.37E+00	υ	1.28E+00	υ	1.37E+00	ΨZ.	ΑA			Υ V
4-bromophenyl-phenylether	101-55-3	NA		NA		Ϋ́	A V	¥			NA
hexachlorobenzene	118-74-1	4.18E-03	C	3.91E-03	င	4.18E-03	٧Z	7.50E+01		T	7.50E+01
pentachlorophenol	87-86-5	5.60E-02	ပ	5.22E-02	C	5.60E-02	NA	1.50E+03		Ţ	1.50E+03
phenanthrene	85-01-8	NA		NA		NA	NA	2.00E+03		Τ	2.00E+03
anthracene	120-12-7	1.10E+03	nc	1.10E+03	่วน	1.10E+03	NA	6.00E+03		T	6.00E+03
di-n-butytphthalate	84-74-2	3.65E+02	nc	3.65E+02	ou	3.65E+02	NA	1.50E+04		Τ	1.50E+04
fluoranthene	206-44-0	1.46E+02	nc	1.46E+02	nc	1.46E+02	AN	3.00E+01		T	3.00E+01
pyrene	129-00-0	1.10E+02	nc	1.10E+02	nc	1.10E+02	NA NA	1.50E+04		T	1.50E+04
butylbenzylphthalate	2-89-58	7.30E+02	nc	7.30E+02	nc	7.30E+02	Š	5.00E+05		Τ	5.00E+05
benzo(a)anthracene	56-55-3	2.17E-02	S	8.58E-03	O	2.17E-02	Ä	6.00E+02		⊢	6.00E+02
chrysene	218-01-9	2.17E+00	O	8.58E-01	ပ	2.17E+00	¥	2.00E+02		⊢	2.00E+02

Appendix C: Health-Based Screening Levels and Acute Toxicity Values

			For the Chro	For the Chronic Evaluation (1160)	(10 Cl)						
	1 9 A. W. 3	Region 19		RAMINA AND	OF (CIBSL)	7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7		For the Acute	Acute Evaluation (ATV)	ATV)	
	048	t rendit	Endpoint Conno			*1881.**			EGL	Source	ATV
3,3-dichlorobenzidine	91-94-1	1.50E-02	S	1.39E-02	200	1 505 00	WALLEY TO SERVICE	Ki Wigilian S. P. (10/mm of the		, (hg/m³)
ois(z-ethylhexyl)phthalate	117-81-7	4.80E-01	C	4 47E.01	,	1.30E-02	NA NA	6.21E+03			6.21F+03
di-n-octyiphthalate	117-84-0	7.30E+01	nc	7.30F+01	2 6	4.80E-01	¥	1.00E+04		-	1.00E+04
Denzo(b)fluoranthene	205-99-2	2.17E-02		A FRE OF	2	7.30E+01	¥	1.50E+05			1.50F+05
benzo(k)fluoranthene	207-08-9	2.17E-01	, ,	8 58E 02	0	2.17E-02	Ϋ́	AN	-		NA
benzo(a)pyrene	50-32-8	2.17E-03	,	2030E-02	O .	2.17E-01	ΑN	NA			NA
indeno(1,2,3-cd)pyrene	193-39-5	2.17F-02		6.02E-03	υ	2.17E-03	NA	7.50E+03			7 505+02
dibenz(a,h)anthracene	53-70-3	2.17F-03	٥	0.38E-U3	٥	2.17E-02	NA	NA			NA TOO
benzo(g,h,i)perylene	191-24-2	NA	3	0.38E-U4	ပ	2.17E-03	A A	3.00E+04			2005
				NA NA		NA	ΑĀ	3.00E+04			3.00E+04
TO-13 (PAHS)										1	3.00E+04
naphthalene	91.20.3	2 425.00							-	\dagger	
acenaphthylene	208-96-8	S. ISETUO	2	3.29E+00	nc	3.13E+00	ΑN	7.86E+04			. 0
Acenaphthene	83-32-0	2 105,02		NA		ΑΝ	AA	2.00F+02			7.80E+04
fluorene	86-73-7	1 48E 100	2	2.19E+02	nc	2.19E+02	¥	1.25E+03	- -	1	Z.U0E+02
phenanthrene	05 04 0	1.405.102	၁	1.46E+02	nc	1.46E+02	NA	7 505+04	-	1	1.255+03
anthracene	9-10-69	NA.		AN		NA	MA	2001-104		1	7.50E+04
Charles	120-12-7	1.10E+03	nc	1.10E+03	20	1 10E+03	<u> </u>	2.00E+03			2.00E+03
nooranimene	206-44-0	1.46E+02	5	1.46E+02		1 485,00	¥.	6.00E+03	_		6.00E+03
pyrene	129-00-0	1.10E+02	22	1 10F±02	2 8	1.40E+UZ	¥.	3.00E+01	1		3.00E+01
benzo(a)anthracene	56-55-3	2.17E-02	O	8 58E-03	2 (1.10E+02	¥	1.50E+04			1.50F+04
chrysene	218-01-9	2.17E+00	C	8 58E-01	J (2.1/E-02	ΨN	6.00E+02	_		6.00F+02
benzo(b)fluoranthene	205-99-2	2.17E-02	, ,	8 58E 02	0	2.17E+00	¥	2.00E+02		T	2 00E+02
benzo(k)fluoranthene	207-08-9	2.17E-01	, 0	8 58E 02	O	2.17E-02	NA	NA		-	NA
Benzo(e)pyrene	192-97-2	¥		NA NA	0	Z.17E-01	₹	NA		$\frac{1}{1}$	NA
benzo(a)pyrene	50-32-8	2.17E-03	U	2 02E-03	,	AN I	ΑĀ		NA	\vdash	A N
indeno(1,2,3-cd)pyrene	193-39-5	2.17E-02		A FRE OF	3	2.17E-03	₹	7.50E+03			7 50F+03
dibenz(a,h)anthracene	53-70-3	2.17E-03		9 505 04	0	2.1/E-02	NA	NA NA		+	NA
benzo(g,h,l)perytene	191-24-2	AN	,	0.30E-04	O	2.17E-03	AA	3.00E+04	-	c	S DOE TO
Dioxins and Furans				2		ΝΑ	NA	3.00E+04		1	3 005 104
2378-Tetrachlorodibenzo-p-dioxi	1746-01-6	4 485 08								1	-00E-104
12378-Pentachlorodibenzo-p-did 40321-76-4	0321-76-4	NA	٥	4.1/E-08	O	4.48E-08	AA	3.50E+00	-	1,	2 505,00
123478-Hexachlorodibenzo-p-dih39227-28-6	9227-28-R	VV		¥.		NA	ΑN	2.50E+00	- -	, (201100
123678-Hexachlorodibenzo-p-dib57653-85-7	7653-85-7			NA NA		AN		AN	-	7	Z.30E+00
123789-Hexachlorodibenzo-p-dib19408-74-3	9408-74-3	1 ABE 08	1	A'A		AN	A A	1.50E+01	-	+	AN I
1234678-Heptachlorodibenzo-n-195822.46.0	5822 48 0	00-30-1	O	1.38E-06	ပ	1.48E-06	¥	NA	-	7	1.50E+01
M. M	16-04-7700	NA NA		NA		A'N	V N	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\		+	NA
							Ç	- \ \ \		_	VIV

The state of the s	To a second	7	TANKELIE	A. C. 18 LAND						-	
			ENHBOURT (COMIC)		Eritipolini Istorifoli					(7 Q L) 49 11 8 S	TATA TA
ocop	3268-87-9	NA		NA		Ϋ́	ΑĀ	1.50E+02		-	1.50E+02
2378-Tetrachlorodibenzo-p-furar 51207-31-9	31207-31-9	NA		NA		ΑN	ΑN	2.00E+00		-	2.00E+00
12378-Pentachlorodibenzo-p-fur67117-41-6	57117-41-6	NA		NA		NA	NA	NA NA			NA NA
23478-Pentachlorodibenzo-o-fur67117-31-4	57117-31-4	NA		NA		NA	NA A	7.50E-02		⊢	7.50E-02
123478-Hexachlorodibenzo-p-fur 70648-26-9	70648-26-9	NA		NA		NA	ΑN	7.50E+00		⊢	7.50E+00
123678-Hexachlorodibenzo-p-ful 57117-44-9	57117-44-9	NA		AN		ΑN	ΑĀ	2.50E+00		_	2.50E+00
123789-Hexachlorodibenzo-p-fur 72918-21-9	72918-21-9	AN		NA		AA	ΑA	NA			¥
234678-Hexachlorodibenzo-p-ful 60851-34-5	30851-34-5	NA		AN		AN	¥	1.50E+00		_	1.50E+00
1234678-Heptachlorodibenzo-p-67562-39-4	37562-39-4	NA		NA		ΑN	NA A	ΑN			Ϋ́
39-Heptachlorodibenzo-p-	55673-89-7	ΝΑ		NA		NA	ΝA	NA			Ϋ́
OCDF	39001-02-0	NA		NA		NA	NA NA	3.00E+02		-	3.00E+02
Energetics											
Nitrobenzene	98-95-3	2.09E+00	nc	2.19E+00	nc	2.09E+00	A A	1.51E+04		٢	1.51E+04
2-Nitrotoluene	88-72-2	3.65E+01	nc	3.65E+01	nc	3.65E+01	Ϋ́	ΝΑ			AN A
3-Nitrotoluene	99-08-1	3.65E+01	nc	7.30E+01	nc	3.65E+01	ΑĀ	ΑN			¥
4-Nitrotofuene	0-66-66	3.65E+01	nc	3.65E+01	nc	3.65E+01	ΑN	3.37E+04		-	3.37E+04
Nitroglycerine	55-63-0	4.80E-01	ပ	4.47E-01	၁	4.80E-01	AN	NA			¥
1,3-Dinitrobenzene	99-62-0	3.65E-01	nc	3.65E-01	nc	3.65E-01	AA	3.00E+03		F	3.00E+03
2,6-Dinitrotoluene	606-20-2	3.65E+00	nc	3.65E+00	nc	3.65E+00	Ν A	6.00E+02		-	6.00E+02
2,4-Dinitrotoluene	121-14-2	7.30E+00	nc	7.30E+00	nc	7.30E+00	NA	6.00E+02	AN	L	6.00E+02
1,3,5-Trinitrobenzene	99-35-4	1.10E+02	nc	1.10E+02	nc	1.10E+02	NA	3.00E+04		۲	3.00E+04
2,4,6-Trinitrotoluene	118-96-7	2.24E-01	ပ	2.09E-01	၁	2.24E-01	NA	2.50E+04		-	2.50E+04
RDX	121-82-4	6.11E-02	ပ	5.69E-02	ပ	6.11E-02	NA	ΝΑ			A A
4-Amino-2,6-Dinitrotoluene	19406-51-0	NA		NA		NA	NA	ΝΑ			Ϋ́
2-Amino-2,6-Dinitrotoluane	35572-78-2	۷		NA		NA	ΥN	1.50E+04		F	1.50E+04
Tetryl	479-45-8	3.65E+01	nc	3.65E+01	nc	3.65E+01	NA	AN			Y Y
НМХ	2691-41-0	1.83E+02	nc	1.83E+02	nc	1.83E+02	NA	NA			NA
Pentaerythritoitetranitrate	78-11-5	NA		AA		NA	NA	5.00E+01		F	5.00E+01
Dibutyl Phthalate	84-74-2	3.65E+02	nc	3.65E+02	nc	3.65E+02	NA	1.50E+04		_	1.50E+04
Dioctyl Phthalate	117-81-7	4.80E-01	ပ	4,47E-01	ပ	4.80E-01	NA	1.00E+04		-	1.00E+04
Diphenylamine	122-39-4	9.13E+01	nc	9.13E+01	uc	9.13E+01	ΑN	3.00E+04		F	3.00E+04

PRG: Preliminary Remediation Goals

c: cancer nc:non-cancer

APPENDIX D RISK ASSESSMENT DATA

Table D-1: Comparison of Air Concentrations With Health-Based Values - 100 meter location

Compound Acid Gases Hydrogen fluoride Hydrogen chloride Hydrogen bromide Nitric Acid Phosphoric acid Suffuric Acid Cyanide Particulate Cyanide Hydrogen Cyanide Particulate Acid Cyanide	Cehronic (µg/m³) NA NA	Health-Based						
	NA	Screening Level (µg/m³)	C _{chronlc} / HBSL	× 12	C _{acute} (µg/m³)	Acute Toxicity Value (µg/m³)	C _{acute} / ATV	> 12
	NA NA							
	NA	AN						
		2 DRE+01		₽ :	¥	1.60E+03		na
	AN	AN.		g l	¥.	4.50E+03		na
	1 ORF-01	NA NA		В	NA NA	9.93E+03		na
	NA	1 045104		g	8.55E-01	1.30E+03	6.58E-04	<u> </u>
	6.02E-02	NV		g :	AN.	3.00E+03		na
		2		B	4.84E-01	2.00E+03	2.42E-04	on O
	4.89E-03	7.30F+01	8 70E 0E	1	1 575 01			
	3.34E-01	3.13F+00	1 07E-03	4	1.37E-01	5.00E+03	3.15E-05	1
			10.1	2	1.075401		2.08E-03	2
	2.40E+00	5.00E+01	4 ROF-02	2	1 035404			
PM10	2.22E+00	5.00E+01	4 43F-02	_	1 78E+01	NA.		na
PM2.5	1.91E+00	1 50F+01	1 2RE 01	L	1.705701	NA.		na
Metals			1.202-01	2	1.345+01	NA AA		na
Aluminum	6.17E-02	5.11E+00	1 21E.03	9	1 005			
Antimony	2.34E-01	1.46E+00	1 BOE 01	2 2	1.90E+00	3.00E+04	6.62E-05	2
Arsenic	ΑΝ	4 47E-04	0.300.1	2 2	1.335+00	1.50E+03	5.02E-03	2
Barlum	1.28E-01	5.21E-01	2 45E.01	2	NA 445 100	3.00E+01		na
Beryllium	ΑN	8.00E-04	E: 10E-0	2 2	4.1.1	1.50E+03	2.74E-03	2
Cadmium	ΑN	1.07E-03		5 0		5.00E+00		na
Calclum	2.70E-02	N		5 0	8 70E 04	1	100	na
Chromlum	NA	1.53E-04		9 0	NA	3.00E+04	Z.90E-05	2
Cobalt	NA	2.20E+02		e	NA N	R ODE+03		E I
Copper	1.18E-01	1.46E+02	8.06E-04	2	3.78E+00	3 00E+03	1 200 03	g :
Lead	3.11E-01	1.50E+00	2.08E-01	2	1.00E+01	1	6 GRE 02	2 2
Magnesium	ΑΝ	>N		na	¥	T	0.00L-02	2 2
Wanganese	AN.	5.11E-02		na	ΑN	3.00E+03		2 2
NICKBI	AN.	7.30E+01		BE	¥	3.00E+03		2 2
Selection	Y Z	1.83E+01		na	AN AN	6.00E+02	T	2 2
Janua	ΨZ.	1.83E+01		na	ΑN	3.00E+02		2 2
Venadium	¥Z.	2.56E-01		na	AN A	3.00E+02		2
Zino	NA C	2.56E+01		na	ΑN	1.50E+02		2 2
TOTA	3.89E-02	1.10E+03	3.55E-05	on O	1.25E+00	T	4 17F-05	2 2
I Carbonyis						T	3	2
Acetaldalada	7.92E-03	1.48E-01	5.36E-02	2	1.49E-01	1.23E+03	1 21F-04	2
anklianiana	Y.	8.73E-01		na	NA			e

D-2

		Cartridge, 5.56-mm Blank, M200 (M16A1 Rifle) DODIC: A080	.56-mm l	nm Blank, M2 DODIC: A080	, M200 (N	116A1 Rifle)		
Compound	С _{chronic} (µg/m³)	Health-Based Screening Level (µg/m³)	C _{chronle} / HBSL	> 12	Cacute (µg/m³)	Acute Toxicity Value (µg/m³)	Cacuto/ ATV	> 12
Acetone	NA	3.65E+02		na	۸×	2.37E+06		na
Acrolein	NA	2.09E-02		na	¥	2.30E+02		na
Proprionaldehyde	NA	۸N		na	¥	7.50E+04		na
Crotonaldehyde	NA	3.54E-03		na	ΑN	5.72E+03		na
Butyraldehyde	۸A	۸N		na	NA	7.38E+04		Ba
Benzaldehyde	Ϋ́	3.65E+02		na	AN	1.50E+04		na
Isovaleraldehyde	NA	≥		ВU	NA	AA		na
Valeraldehyde	NA	N<		na	AN	NA		na
o,m,p-Tolualdehyde	NA	۸N		na	ΑN	NA		na
Hexaldehyde	Ϋ́	NV		มล	NA	AN		B
2,5-Dimethylbenzaldehyde	NA	NV		na	N N	NA		Ba
Hydrocarbons								
Methane	5.24E-01	NV		na	1.69E+01	3.30E+06	5.11E-06	2
Ethylene	2.12E-01	N N		na	6.81E+00	4.60E+05	1.48E-05	!
Acetylene	1.33E-01	N\		กล	1.07E+00	NA		1
Ethane	2.36E-02	NV		na	1.90E-01	NA		па
Propylene	5.03E-02	NV		มล	4.05E-01	AN		na
Propane	A A	NV		na	۸A	3.78E+06		na
Propyne (methyl acetylene)	8.38E-03	NV		na	2.70E-01	2.79E+06	9.67E-08	2
Isobutane	NA	N		na	NA	9.52E+05		E
1-Butene/Isobutylene (115-11-7)	1.41E-02	NΛ		na	4.53E-01	6.87E+06	6.59E-08	2
1,3-Butadlene/butane	NA	3.74E-03		na	ΑN	2.20E+04		na
cis-butene	AN	>N		na	NA	1.72E+04		na
1-Butyne	ΨN	N/		na	NA	NA		na
trans-Butene	NA	2		na	ΑN	1.72E+04		na
2-Butyne (crotonylene)	NA	2		na	A A	NA		na
n-Pentane	NA	N/		па	ΝA	1.80E+06		na
n-Hexane	7.68E-03	2.10E+02	3.66E-05	00	2.47E-01	5.28E+05	4.68E-07	2
Dloxins/Furans								
2378-Tetrachlorodibenzo-p-dioxin	NA	4.48E-08		na	NA	3.50E+00		Ba
12378-Pentachlorodlbenzo-p-dloxin	Ϋ́	NV		ทล	ΑN	2.50E+00		na
123478-Hexachlorodibenzo-p-dioxin	NA	AN		na	ΑN	AA		na
123878-Hexachlorodibenzo-p-dioxin	NA	۸N		na	NA	1.50E+01		Ba
123789-Hexachlorodibenzo-p-dioxin	NA	1.48E-06		na	ΝΑ	AN		E
1234878-Heptachlorodibenzo-p-dioxin	ΑN	N		na	Ϋ́	NA A		na
OCDD	6.81E-10	۸N		na	2.19E-08	1.50E+02	1.46E-10	2
2378-Tetrachlorodibenzo-p-furan	NA	N<		ทล	NA	2.00E+00		na
12378-Pentachtorodibenzo-p-furan	AN	N<		na	NA	NA		na
23478-Pentachlorodibenzo-o-furan	NA	N		na	NA	7.50E-02		na

A A 1.56E+00 A 1.50E+00 A 1.50E+00 A 1.50E+00 A 1.50E+00 A 1.50E+00 A 1.75E+04 A 1.75E+04 A 1.75E+04 A 1.75E+04 A 1.75E+04 B 2.30E+05 C 2.30E+05 C 3.00E+05 C 3.00E+06 C 3.00E+0			Cartridge,	5.56-mm DO	Blan DIC:	nm Blank, M200 (n DODIC: A080	Cartridge, 5.56-mm Blank, M200 (M16A1 Rifle) DODIC: A080		
NA NA NA NA 7.50E+00 NA NA NA 7.50E+00 NA NA NA 7.50E+00 NA NA NA 7.50E+00 NA NA NA 1.50E+00 NA NA NA 1.50E+00 NA NA 1.00E+02 NA 1.50E+02 A 13E+03 NA 1.00E+02 1.00E+02 3.00E+02 A 13E+01 NA 1.00E+02 1.00E+02 3.00E+02 A 13E+02 1.00E+02 1.30E+03 3.00E+02 A 13E+03 NA 1.5E-04 1.5E-04 A 15E+04 NA 1.20E+05 3.00E+05 A 15E+05 NA 1.20E+05 3.00E+05 NA 5.12E+04 NA 1.20E+05 NA 2.20E+05 NA 1.40E+07 NA 3.5E+05 3.5E+05 3.00E+05 NA 3.7E+06 NA 1.40E+06 NA 3.5E+05	Compound	C _{chrontc} (µg/m³)	Health-Based Screening Level (µg/m³)	C _{chronlc} / HBSL	× 13	Cacute (µg/m³)	Acute Toxicity Value (µg/m³)	Cacute/ ATV	> 12
NA	123478-Hexachlorodibenzo-p-furan	NA	VIIV						
NA	123678-Hexachlorodibenzo-p-furan	NA	A N		B	Ϋ́	7.50E+00		e
NA	123789-Hexachlorodibenzo-p-furan	ΔN	2 2		g	NA	2.50E+00		2
NA	234678-Hexachlorodibenzo-p-furan	AM			밀	ΝΑ	NA		2
NA NA NA NA NA NA NA NA na NA NA NA NA NA na NA NA NA 1046+02 na NA 1.756+02 2.306+02 1006+04 1.006+02 4.896-03 na 1.756+02 2.306+05 4.136+00 1.006+02 4.136-02 no 1.756+02 2.306+05 4.096-02 8.006+01 5.126-04 no 3.296-01 7.896+05 A.096-02 8.006+01 5.126-04 no 3.296-01 7.896+02 NA 1.076-00 2.276-09 no 3.296-01 7.896+02 NA 1.076-09 5.466-02 no 1.486-07 1.486-07 NA NA 3.746-03 9.546-02 no 1.486-07 NA NA 2.206-02 no 1.826-03 1.266-04 NA 2.216-02 2.276-06 no 3.296-01 1.486-07	1234678-Heptachlorodibenzo-p-furan	ΝΑ	27		밀	AA	1.50E+00		2
NA	1234789-Heptachlorodibenzo-p-furan	AM	2		Ē	Ϋ́	AN		2
NA 1.04E+02	OCDF	NA	NA NA		<u>в</u>	A A	NA		E
NA	Permanent Gases		AN		E	٩	3.00E+02		g
1,75E+01	Ammonia (NH3)	WA	1 045102						
B.89E+01 1.00E+04 B.89E-03 no 7.15E+02 2.30E+05 4.13E+00	Carbon Dioxide (CO2)	7.17E+01	NIV		ē	Ϋ́	1.75E+04		g
O) 4,15E+00 1,00E+02 6,69E+03 no 7,15E+02 2,30E+05 3,34E-02 8,00E+01 4,13E+02 no 3,29E+01 7,80E+04 3,34E-02 NV na 2,69E+07 7,80E+02 3,00E+04 1,55E-05 2,09E+02 7,42E-08 no 4,99E-04 1,49E+07 NA 5,11E+04 na NA 4,41E+06 NA 2,09E+02 7,42E-08 no 4,99E-04 1,49E+07 NA 2,00E-03 1,07E+00 2,27E-05 no 1,82E-03 2,0EE+05 NA 2,20E-02 na NA 2,10E+07 NA 2,32E+00 na NA 1,48E+07 NA 2,32E+00 na NA 1,48E+07 NA 2,09E+02 1,74E+00 9,41E-04 2,81E+06 NA 3,62E-02 2,09E+02 1,74E+00 1,35E+04 NA 3,62E-02 1,74E+00 NA 1,48E+07 NA 3,62E-02	Carbon Monoxide (CO)	8 89F+01	1 005+04	100		2.31E+03	5.40E+07	4.27E-05	2
3.34E-02 8.00E+01 4.13E-02 no 1.35E+02 3.08E+04 3.34E-02 NV 6.12E-04 no 3.29E-01 7.89E+02 1.55E-05 2.09E+02 7.42E-08 no 4.98E-04 1.48E+07 NA 5.11E+04 na NA 4.41E+06 NA 2.05E-02 7.20E-03 2.0E+05 3.56E-04 1.07E+00 2.27E-05 no 1.82E-03 2.0E+05 NA 2.20E-02 na NA 2.0E+05 NA 2.3EE+00 na NA 2.0E+05 NA 2.09E+02 na NA 2.0E+06 NA 2.09E+02 na NA 2.0E+06 NA 2.09E+02 na NA 1.80E+06 NA 2.09E+02 1.74E+00 na NA 1.80E+06 NA 3.6EE+02 na NA 1.80E+06 NA 3.6EE+02 na NA 1.45E+06 NA 3.6EE+02	Oxides of Nitrogen (as NO)	4 13F+00	1,000,100	8.69E-03	2	7.15E+02	2.30E+05	3.11E-03	1
3.34E-02 NV NA 1.55E-05 1.05E-05 1.05E-	Sulfur Dioxide (SO2)	4.09E-02	8 00E+04	4. 13E-02	2	1.33E+02	3.08E+04	4.32E-03	1
3.34E-02 NV na 2.69E-01 NA 1.55E-05 2.09E+02 7.42E-08 no 4.98E-04 1.48E+07 NA 5.11E+04 na NA 4.41E+06 NA 2.20E-02 na NA 2.10E+07 NA 2.20E-02 na NA 2.10E+07 NA 2.20E-02 na NA 2.20E+05 NA 2.20E-02 na NA 2.20E+04 NA 2.20E-02 na NA 2.20E+04 NA 2.20E-02 na NA 2.20E+04 NA 2.20E+02 na NA 2.64E+06 NA 2.03E+02 na NA 1.48E+07 NA 3.62E-02 2.09E+02 4.01E-08 na NA 1.48E+07 NA 3.62E-02 7.30E+02 na NA 1.48E+07 1.48E+07 NA 3.62E-02 7.30E+02 na NA 1.36E+06 NA 3	VOC®		1000	3. IZE-U4	2	3.29E-01	7.89E+02	4.17E-04	ı
1.55E-05 2.09E+02 7.42E-08 no 4.98E-01 NA NA	Propene	3.34E-02	NN.						
NA 5.05E-02 7.42E-08 no 4.98E-04 1.48E+07 NA 5.11E+04 na NA 4.41E+06 NA 2.43E-05 1.07E+00 2.27E-05 no 1.82E-03 2.06E+05 NA 2.20E-02 na NA 2.20E+04 3.74E-03 9.54E-02 no 1.28E+04 NA 2.32E+00 na NA 2.20E+04 2.0E+05 no 6.68E-03 2.20E+04 NA 2.32E+00 na NA 2.64E+06 na NA 2.64E+06 NA 2.03E-05 7.30E+02 na NA 1.80E+05 NA 3.62E-02 2.09E-02 1.74E+00 yas 2.91E-04 2.36E+06 NA 3.62E-02 2.09E-02 1.74E+00 yas 2.91E-04 2.30E+06 NA 3.62E-02 2.09E-02 1.74E+00 yas 2.91E-04 2.37E+06 NA 3.62E-02 2.09E-02 1.76E+02 na NA 1.35E+05 <td>Dichlorodifluoromethane</td> <td>1.55E-05</td> <td>2005.02</td> <td>10, 1</td> <td>a</td> <td>2.69E-01</td> <td>NA</td> <td></td> <td>na</td>	Dichlorodifluoromethane	1.55E-05	2005.02	10, 1	a	2.69E-01	NA		na
NA NA 4.41E+06 NA 1.07E+06 2.27E-05 no 1.82E-03 2.10E+07 NA 2.20E-05 no 1.82E-03 2.06E+05 NA 2.20E-04 3.74E-03 9.54E-02 no 1.82E-04 NA 2.20E-04 3.74E-03 9.54E-02 no 6.68E-03 2.06E+04 NA 2.32E+00 na NA 1.28E+04 NA 2.09E+02 na NA 2.04E+06 NA 2.03E+02 na NA 1.48E+07 NA 3.62E-02 2.09E-02 1.74E+00 yes 2.91E-04 NA 3.62E-02 2.09E-02 1.74E+00 yes 2.91E-07 2.30E+02 NA 3.62E-02 2.09E-02 1.74E+00 yes 2.91E-01 2.30E+02 NA 3.13E+04 na NA 1.45E+05 NA 3.0E-02 6.20E+07 1.01E+06 1.01E+06 NA 1.04E+00 na NA	Chlorodifluoromethane	NA	£.09E+02	7.42E-08	읟	4.98E-04	1.48E+07	3.36E-11	2
2.43E-05 1.07E+00 2.27E-05 no 1.82E-03 2.10E+07 NA 2.20E-02 na NA 1.28E+04 3.56E-04 3.74E-03 9.54E-02 no 1.82E-03 2.06E+05 NA 5.21E+00 na NA 1.28E+04 NA 2.32E+00 na NA 5.04E+06 NA 2.03E+02 na NA 2.04E+06 NA 2.03E+02 na NA 1.48E+07 NA 3.02E-02 2.09E+02 1.74E+00 yes 2.91E+04 2.81E+06 NA 3.62E+02 1.74E+00 yes 2.91E-01 2.30E+02 NA 3.13E+04 na NA 1.45E+06 NA 3.65E+02 na NA 1.45E+06 NA 3.06E+02 1.76E-04 2.37E+06 NA 1.04E+00 na NA 1.45E+05 NA 1.04E+00 1.06E+04 0.36E+05 NA 1.04E+00 1.6	Freon 114		3.11=+04		na	NA	4.41E+06		2 2
NA 2.20E-02 na 1.62E-03 2.06E+05 3.56E-04 3.74E-03 9.54E-02 no 6.68E-03 2.06E+05 NA 5.21E+00 na NA 1.28E+04 NA 2.32E+00 na NA 5.64E+06 NA 2.09E+02 na NA 2.64E+06 NA 2.09E+02 na NA 2.64E+06 NA 2.09E+02 na NA 1.80E+06 NA NA 1.74E+00 na NA 1.80E+06 NA 3.13E+02 na NA 1.45E+06 na NA 1.45E+06 NA 3.13E+02 na NA 1.45E+06 na NA 1.45E+06 NA 3.06E+02 na NA 1.01E+06 na na NA 3.95E+06 NA 1.06E+03 7.30E+02 na NA 3.95E+06 na na NA 1.75E+06 NA 1.04E+00 2.36E-03 <td>Chloromethane</td> <td>2 42 1 05</td> <td>N</td> <td></td> <td>na</td> <td>NA</td> <td>2.10E+07</td> <td></td> <td>2 2</td>	Chloromethane	2 42 1 05	N		na	NA	2.10E+07		2 2
3.56E-04 3.74E-03 9.54E-02 no 6.68E-03 2.20E+04 NA 5.21E+00 na NA 5.82E+04 NA 2.32E+00 na NA 5.82E+04 NA 2.09E+02 na NA 2.64E+06 NA 2.09E+02 na NA 1.48E+07 NA 2.09E+02 na NA 1.48E+06 NA NA 1.78E+06 na NA 1.80E+06 NA 3.62E-02 2.09E-02 1.74E+00 yes 2.91E-01 2.30E+02 NA 3.13E+04 na NA 1.35E+06 na NA 1.45E+06 NA 3.13E+04 na NA 1.45E+06 na NA 1.45E+06 NA 1.04E+02 na 1.6E-01 3.0E+05 na 1.01E+04 NA 1.04E+02 na NA 1.01E+04 0.3E+05 1.01E+04 NA 1.04E+02 1.75E-01 na NA	Vinyl Chloride	2.435-05	1.07E+00	2.27E-05	uo	1.82E-03	T	R RSE_00	2
NA 3.74E-03 9.54E-02 no 6.68E-03 2.20E+04 NA 5.21E+00 na NA 5.82E+04 NA 2.32E+00 na NA 2.64E+06 2.93E-05 7.30E+02 na NA 1.48E+07 NA 2.09E-02 4.01E-08 no 9.41E-04 2.81E+06 NA 3.62E-02 2.09E-02 1.74E+00 yes 2.91E-01 2.30E+02 NA 5.21E+02 na NA 1.80E+06 1.80E+06 NA 3.13E+04 na NA 2.37E+06 NA 3.65E+02 na NA 1.45E+05 NA 1.04E+02 na NA 1.45E+05 NA 1.04E+00 na 1.61E-01 3.1E+04 NA 1.04E+00 na 1.61E-01 3.1E+04 NA 1.04E+00 na 1.61E-01 1.01E+04 NA 1.04E+00 na 1.81E-01 1.01E+04 NA	1.3-Butadiana	NA NA	2.20E-02		na	ΑΝ		0.00-	
NA 5.21E+00 na NA 5.82E+04 NA 2.32E+00 na NA 2.64E+06 NA 2.09E+02 na NA 1.48E+07 2.93E-05 7.30E+02 4.01E-08 no 9.41E-04 2.81E+06 NA 5.21E+02 1.74E+00 yes 2.91E-01 2.30E+02 NA 3.13E+04 na NA 7.92E+04 NA 3.65E+02 na NA 7.92E+04 NA 3.65E+02 na NA 7.92E+04 NA 3.65E+02 na NA 7.92E+06 NA 1.04E+00 na 1.61E-01 3.11E+04 5.00E-03 7.30E+02 6.84E-06 no 1.61E-01 3.11E+04 NA 1.04E+00 na NA 4.55E+05 NA NA 1.04E+00 na NA 4.55E+06 NA NA NA NA 1.30E+01 na NA 4.55E+06 NA NA NA NA NA 4.95E+04 NA NA NA NA NA 4.95E+04 NA NA NA NA NA 4.95E+04 NA NA NA NA NA NA 4.55E+05 NA N	Bromomethane	3.30E-U4	3.74E-03	9.54E-02	2	6.68E-03	2.20E+04	3 04E 07	2 2
NA 2.32E+00 na NA 2.64E+06 NA 2.09E+02 na NA 1.48E+07 NA NV na NA 1.80E+06 NA 3.62E-02 2.09E-02 1.74E+00 yes 2.91E-01 2.30E+02 NA 3.13E+04 na NA 7.92E+04 NA 3.65E+02 na NA 7.92E+04 NA 3.65E+02 na NA 7.92E+04 NA 1.04E+00 na NA 1.45E+06 NA 1.04E+00 na NA 1.45E+05 NA 1.04E+00 na 1.61E-01 3.11E+04 9.64E-03 7.30E+01 7.60E-04 na 1.81E-01 6.96E+05 NA NA NA NA NA 4.55E+05 NA NA NA NA NA 4.55E+06 NA NA NA NA NA NA 4.55E+06 NA NA NA NA NA NA 4.55E+06 NA N	Chloroethana	¥.	5.21E+00		na	AN	5.82E+04	2.072-07	2 2
2.93E-05 7.30E+02 4.01E-08 no 9.41E-04 2.81E+06	Dichlorofluoromethane	Y S	2.32E+00		na	¥	2.64E+06		2 2
A.36E-02	Trichlorofluoromethana	70.70	2.09E+02		na	AN	1.48E+07		5
3.62E-02 2.09E-02 1.74E+00 yes 2.91E-01 2.30E+02 NA 3.13E+04 na NA 7.92E+04 NA 3.65E+02 na NA 7.92E+04 NA 3.65E+02 na NA 7.92E+04 NA NA 1.45E+05 na NA 1.45E+05 6.00E-03 7.30E+02 6.84E-06 no 1.61E-01 3.11E+04 NA 1.04E+00 no 1.52E+00 1.01E+05 NA 1.04E+00 no 1.52E+00 1.01E+05 NA NV na NA 4.55E+05 NA 1.75E-01 na NA 4.55E+05 NA 1.30E+03 2.83E-02 2.17E+04 4.55E+05	Pentane	4.93E-U3	/.30E+02	4.01E-08	00	9.41E-04	2.81E+06	3.36F-10	2 5
NA 5.21E+02 1.74E+00 yes 2.91E-01 2.30E+02 NA 3.13E+04 na NA 7.92E+04 NA 3.65E+02 na NA 2.37E+06 NA NV na NA 2.37E+06 5.00E-03 7.30E+02 6.84E-06 no 1.61E-01 3.11E+04 NA 1.04E+00 no 1.52E+00 1.01E+05 NA 1.04E+00 no 1.52E+00 1.01E+05 NA NA 1.81E-01 6.96E+05 7 NA NV na 1.81E-01 6.96E+05 NA 7.30E+01 na NA 4.55E+06 NA 7.30E+01 na NA 4.55E+06 NA 3.13E+03 na NA 4.95E+04	Acrolein	3 625 02	NA NA NA NA NA NA NA NA NA NA NA NA NA N		na	NA	1.80E+06		2 2
NA 3.13E+04 na NA 7.92E+04 NA 3.65E+02 na NA 9.58E+06 NA NV na NA 1.45E+06 5.00E-03 7.30E+02 6.84E-06 no 1.61E-01 3.11E+04 NA 1.04E+00 no 1.52E+00 1.01E+05 1.01E+05 NA 1.04E+00 2.36E-03 no 1.81E-01 6.96E+05 NA NV NV 4.55E+05 2.17E+04 4.55E+06 NA 7.30E+01 na NA 4.55E+06 2.17E+04 NA 7.30E+01 na NA 4.55E+06 4.55E+06 NA 3.13E+03 na NA 4.55E+04 4.55E+06	1,1-Dichloroethene	NA	5.09E-02	1./4E+00	yes	2.91E-01	2.30E+02	1.27E-03	2
NA 3.65E+02 na NA 9.58E+06 NA NV na NA 2.37E+06 NA 7.30E+02 6.84E-06 no 1.61E-01 3.11E+04 4.71E-02 6.20E+01 7.60E-04 no 1.52E+00 1.01E+05 NA 1.04E+00 na NA 9.39E+03 NA NV na 9.39E+03 NA NV na 4.55E+05 NA 1.75E-01 na NA 4.55E+05 NA 7.30E+03 2.83E-02 1.75E-01 na NA 4.95E+04 NA 3.13E+03 na NA 4.95E+04 4.95E+04	Freon 113	NA	3 13E TO		ē	AA	7.92E+04		g
NA NA C.37E+06 5.00E-03 7.30E+02 6.84E-06 no 1.61E-01 3.11E+04 4.71E-02 6.20E+01 7.60E-04 no 1.52E+00 1.01E+05 NA 1.04E+00 na NA 9.39E+03 NA NA NA 9.39E+03 NA NA 4.55E+06 NA 1.75E-01 na NA 4.55E+06 NA 7.30E+03 1.75E-01 na A.55E+06 NA 7.30E+01 na NA 4.95E+04 NA 3.13E+03 na NA 4.95E+04	Acetone	NA NA	3 655+03		Ē	NA A	9.58E+06		g
5.00E-03 7.30E+02 6.84E-06 no 1.61E-01 3.11E+04 A.71E-02 6.20E+01 7.60E-04 no 1.52E+00 1.01E+04 NA 1.04E+00 na NA 9.39E+03 NA NA NA 9.39E+03 A.99E-03 2.36E-03 no 1.81E-01 6.96E+05 NA 7.30E+01 no 9.28E-02 2.17E+04 NA 7.30E+01 no 9.28E-02 2.17E+04 NA 3.13E+03 na NA 4.95E+04	Methyl todide	NA	NIV NIV		2	Y Y	2.37E+06		na
4.71E-02 6.20E+01 7.60E-04 no 1.61E-01 3.11E+04 NA 1.04E+03 4.09E+00 2.36E-03 no 1.52E+00 1.01E+05 NA 4.09E+00 2.36E-03 no 1.81E-01 6.96E+05 A.94E-03 2.83E-02 1.75E-01 no 9.28E-05 2.77E+04 NA 7.30E+01 na NA 4.95E+04 NA 3.13E+03 na NA 4.95E+05	Carbon Disulfide	5.00E-03	7 30E±02	00 77	2	VA V	1.45E+05		na
NA 1.04E+00 7.50E+00 1.01E+05 NA 1.04E+00 2.36E-03 no 1.52E+00 1.01E+05 NA 4.09E+00 2.36E-03 no 1.81E-01 6.96E+05 4.94E-03 2.83E-02 1.75E-01 no 9.28E-05 2.77E+04 NA 7.30E+01 na NA 4.95E+04 NA 3.13E+03 na NA 4.95E+05	Acetonitrile	4.71F-02	6 20E 104	0.04E-Ub	2	1.61E-01		5.17E-06	02
9.64E-03 4.09E+00 2.36E-03 no 1.81E-01 6.96E+03 NV na NA 4.55E+05 NA 4.55E+05 NA NA 7.30E+01 na NA 4.95E+04 NA 3.13E+03 na NA 4.35E+05 NA 4.35E+05 NA 4.35E+05 NA 4.35E+05	3-Chloropropene	AN	1 045401	1.50E-04	2	1.52E+00		1.50E-05	2
A 94E-03 2.83E-02 1.75E-01 no 9.28E-02 2.17E+04 NA 7.30E+01 na NA 4.95E+05 NA 3.13E+03 na NA 4.32E+05	Methylene Chloride	9 64F-03	A 00E 100	1000	па	Y Y			na
4.94E-03 2.83E-02 1.75E-01 no 9.28E-02 2.17E+04 NA 7.30E+01 na NA 4.95E+04 NA 3.13E+03 na NA 4.32E+05	tert-Butyl Alcohol	NA	4.095400	2.36E-03	_	1.81E-01		2.60E-07	2
NA 7.30E+01 na NA 4.95E+04 NA 3.13E+03 na NA 4.32F+05	AcrylonItrile	4 04E-03	AN CO			NA			2 2
NA 3.13E+03 na NA 4.32F+05	frans-1,2-Dichloroethene	NA	7.03E-02	1.75E-01		9.28E-02		4.27E-06	2
NA na NA	Methyl t-Butyl Ether	AN	3 125 103		ē	NA	4.95E+04		na Eu
			3. ISETUS		g	NA	4.32E+05		20

D-4

		Cartridge, 5.56-mm Blank, M200 (M16A1 Rifle) DODIC: A080	.56-mm E	nm Blank, M2 DODIC: A080	, M200 (N ,080	16A1 Rifle)		
Compound	C _{chronic} (µg/m³)	Health-Based Screening Level (µg/m³)	C _{chronic} / HBSL	× 12	Cacute (µg/m³)	Acute Toxicity Value (µg/m³)	Cacute/ ATV	> 12
Hexane	3.83E-02	2.09E+02	1.84E-04	2	1.23E+00	5.28E+05	2,33E-06	2
1,1-Dichloroethene	ΑN	5.21E+02		na	¥.	7.92E+04		L
Vinyl Acetate	NA	2.09E+02		na	A A	1.92E+04		na
cls-1,2-Dichloroethene	NA	3.65E+01		na	ΑA	7.92E+05		па
2-Butanone	2.86E-04	1.04E+03	2.74E-07	2	9.19E-03	8.85E+05	1.04E-08	1_
Ethyl Acetate	2.22E-03	3.29E+03	6.76E-07	2	7.14E-02	1.44E+06	4.96E-08	1_
Methyl Acrylate	ΑN	1.10E+02		na	ΑN	AN		na
Chloroform	ΝΑ	8.35E-02		na	NA	9.76E+03		na
1,1,1-Trichloroethane	NA	1.04E+03		na	Α¥	1.94E+06		na
Carbon Tetrachloride	ΑΝ	1.28E-01		na	A'A	1.28E+05		e c
1,2-Dichloroethane	9.18E-04	7.39E-02	1.24E-02	20	6.89E-02	8.08E+03	8.53E-06	1
Вепгепе	4.71E-02	2.49E-01	1.89E-01	2	8.84E-01	1.56E+05	5.67E-06	1
Isooctane (2,2,4-trimethylpentane)	NA	N/		na	ΝA	3.50E+05		
Heptane	NA	۸N		na	NA	1.80E+06		na
Trichloroethane	NA	1.04E+03		na	NA NA	1.94E+06		па
Ethyl Acrylate	NA	1.40E-01		na	NA	6.14E+04		na
1,2-Dichloropropane	NA	9.89E-02		na	NA	5.08E+05		na
Methyl Methacrylate	NA	7.30E+02		па	NA	4.09E+05		na
Dibromomethane	NA	3.65E+01		na	NA	2.50E+05		na
1,4-Dloxane	ΝΑ	6.11E-01		na	NA	9.00E+04		na
Bromodichloromethane	NA	1.08E-01		na	NA	4.00E+03		па
4-Methyl-2-Pentanone	6.40E-04	8.34E+01	7.67E-06	no	2.06E-02	3.07E+05	6.71E-08	
Toluene	1.63E-02	4.02E+02	4.05E-05	пO	1.31E-01	1.88E+05	6.98E-07	_
Octane	ΑN	N N		na	NA	NA		na
trans-1,3-Dichloropropene	۸N	5.17E-02		na	¥.	NA		na
Ethyl Methacrylate	ΑN	3.29E+02		na	NA	NA		na
1,1,2-Trichloroethane	Y N	1.20E-01		na	ΑĀ	1.64E+05		na
Tetrachioroethene	NA	3.31E+00		na	ΑN	6.78E+05		na
2-Hexanone	AN	5.11E+00		na	Ϋ́	4.09E+04		na
Dibromochloromethane	AN A	8.00E-02		na	NA	6.00E+03		na
1,2-Dibromoethane	ΨN	8.73E-03		na	NA	1.54E+05		na
Chlorobenzene	NA	6.21E+01		na	۷V	1.38E+05		na
1,1,1,2-Tetrachloroethane	ΝΑ	2.60E-01		na	۷N	5.15E+04		na
Ethylbenzene	3.41E-04	1.06E+03	3.22E-07	90	1.10E-02	5.43E+05	2.02E-08	DO.
m&p-Xylene	9.41E-04	7.30E+02	1.29E-06	01	3.03E-02	6.51E+05	4.65E-08	
o-Xylene	1.75E-04	7.30E+02	2.40E-07	DQ.	5.63E-03	6.51E+05	8.65E-09	no
Slyrene	1.50E-03	1.06E+03	1.42E-06	2	1.21E-02	2.13E+05	5.67E-08	מם
Bromoform	NA NA	1.75E+00		na	NA	6.20E+03		na
Cumene	NA	4.02E+02		na	NA	2.46E+05		na

		Cartridge, 5.56-mm Blank, M200 (M16A1 Rifle) DODIC: A080	.56-mm E	nm Blank, M2 DODIC: A080	, M200 (N ,080	116A1 Riffe)		
Compound	C _{chronle} (µg/m³)	Health-Based Screening Level (µg/m³)	C _{chronic} / HBSL	> 12	Cacute (µg/m³)	Acute Toxicity Value (μg/m³)	Cacute/ ATV	× 12
1,1,2,2-Tetrachloroethane	ΑN	3.31E-02		na	AA	2.06E+04		na Br
1,2,3-Trichtoropropane	NA	9.61E-04		na	NA NA	6.03E+04		na
Bromobenzene	NA NA	1.04E+01		na	NA NA	4.82E+04		na
4-Ethyltoluene	1.69E-04	N		na	5.44E-03	1.25E+05	4.35E-08	1
1,3,5-Trimethylbenzene	7.37E-05	6.21E+00	1.19E-05	90	2.37E-03	3.68E+05	6.44E-09	
Alpha Methyl Styrene	NA	2.56E+02		na	A.	NA		1
1,2,4-Trimethylbenzene	9.90E-05	6.21E+00	1.60E-05	90	3.19E-03	1.80E+05	1.77E-08	
1,3-Dichlorobenzene	NA	3.29E+00		na	ΑĀ	3.61E+04		┸
1,4-Dichlorobenzene	NA	3.06E-01		na	¥	6.61E+05		na
Benzyl Chloride	NA	3.96E-02		na	NA	5.20E+03		a
1,2-Dichlorobenzene	NA	2.09E+02		na	ΝA	3.01E+05		na L
Hexachlorethane	NA	4.80E-01		na	AA	2.90E+04		na
1,2,4-Trichlorobenzene	NA	2.08E+02		a	ΑA	3.71E+04		na
Hexachlorobutadiene	NA	8.73E-02		na	¥	3.21E+04		a
								L
SVOCe								
n-nitrosodimethylamine	NA	1.37E-04		па	ΑĀ	2.50E+03		na
bls(2-chloroethyl)ether	NA	5.82E-03		na	ΑN	5.85E+04		na
phenol	1.79E-03	2.19E+03	8.18E-07	2	5.76E-02	3.85E+04	1.50E-06	
2-chlorophenol	NA	1.83E+01		na	AA	5.25E+03		1
1,3-Dichlorobenzene	NA	3.29E+00		na	NA	3.61E+04		na
1,4-dichlorobenzene	NA	3.06E-01		na	NA	6.61E+05		na
1,2-dichlorobenzene	A N	2.09E+02		na	NA	3.01E+05		na
Denzyl alconol	ΑA	1.10E+03		na	ΝA	5.53E+04		na
bls(2-chlorolsopropyl)ether	Y.	1.92E-01		na	NA	6.99E+04		na
z-metnyipnenoi	Y S	1.83E+02		па	ΑA	NA		na
riexachioroginano	Y.	4.80E-01		E	¥	2.90E+04		na
in-in-in-in-in-in-in-in-in-in-in-in-in-i	¥ S	9.61E-04		g	Y.	2.00E+02		пa
4-memyphenol	Y.	1.83E+02		Ba	Y Y	AN		na
nikobanzana	NA S	2.09E+00		na	Y Y	1.51E+04		na
Isopnorone	Y .	/.UBE+00		g	Y _A	2.83E+04		na
z-nitropnenot	YA.	NA.		na	ΝA	NA		na
2,4-dimethylphenol	NA NA	7.30E+01		na	NA	NA		na
DIS(z-chioroethoxy)methane	NA.	SN.		g	ΑN	NA		na
2,4-dichlorophenol	AN	1.10E+01		na	NA	3.00E+04		na
1,2,4-trichlorobenzene	AN	2.08E+02		na	ΝA	3.71E+04		na
naphthalene	9.22E-06	3.13E+00	2.95E-06	2	2.97E-04	7.86E+04	3.77E-09	2
4-chloroaniline	AN	1.46E+01		na	NA	3.00E+04		Па
hexachlorobutadiene	AN	8.62E-02		na	NA	3.21E+04		na

Continue			Cartridge, 5	.58-mm 8	nm Blank, M2 DODIC: A080	M200 (N	Cartridge, 5.56-mm Blank, M200 (M16A1 Rifle) DODIC: A080		
NA NV NA NV NA	Compound	Cehronic	Health-Based Screening Level	C _{chrontc} /	> 12	Cacute	Acute Toxicity	Cacute/	> 12
NA NV na NA 7.30E+01 na NA 7.30E+02 na NA 1.10E+02 na NA 2.92E+02 na NA 2.92E+02 na NA 3.65E+00 na NA 1.46E+02 na NA 1.37E+00 na NA 1.37E+00 na NA 1.10E+03 na NA 1.10E+03 na NA 1.10E+02 na NA 1.10E+02 na NA 1.10E+02 na		(mgH)	(µg/m³)	IIBSE		(m/grl)	value (µg/m²)	2	
NA 7.30E+01 na NA 7.30E+02 na NA 1.10E+02 na NA 2.92E+02 na NA 2.92E+02 na NA 2.92E+04 na NA 3.65E+04 na NA 3.65E+04 na NA 2.19E+02 na NA 7.30E+00 na NA 7.30E+00 na NA 7.30E+01 na NA 7.30E+02 na NA 1.46E+02 na NA 1.46E+02 na NA 1.37E+00 na NA 1.37E+00 na NA 1.10E+02 na	4-chloro-3-methylphenol	NA	NV		na	ΑN	2.00E+04		na
NA 7.30E-02 na NA 1.10E+02 na NA 2.92E+02 na NA 2.92E+02 na NA 2.92E+04 na NA 3.65E+04 na NA 3.65E+04 na NA 2.19E+02 na NA 7.30E+00 na NA 7.30E+00 na NA 7.30E+01 na NA 7.30E+02 na NA 1.46E+02 na NA 1.37E+00 na NA 1.37E+00 na NA 1.10E+03 na NA 1.10E+03 na NA 1.10E+02 na NA 2.17E+00 na NA 2.17E-02 na	2-methylnaphthalene	ΑN	7.30E+01		na	ΑN	2.00E+04		na
NA 3.65E+02	hexachlorocyclopentadlene	NA	7.30E-02		na	ΑĀ	2.23E+02		na
NA 2.92E+02	2,4,6-trichlorophenol	NA	1.10E+02		na	¥	3.00E+04		na
NA 2.92E+02	2,4,5-trichlorophenol	NA	3.65E+02		na	ΑN	3.00E+04		Da
NA 2.09E-01 na	2-chloronaphthalene	NA	2.92E+02		na	AN A	6.00E+02		na
NA 3.65E+04	2-nitroaniline	ΑN	2.09E-01		na	NA	NA		2
NA 3.65E+04 na NA NA 2.19E+02 na	Acenaphthylene	۸A	N		na	A A	2.00E+02		na
NA 2.19E+02	dimethylphthalate	NA	3.65E+04		na	A A	1.50E+04		na n
NA 2.19E+02	2,6-dinitrotoluene	NA	3.65E+00		па	Ϋ́	6.00E+02		na
NA 7.30E+00	acenaphthene	NA	2.19E+02		na	¥	1.25E+03		na
NA 7.30E+00 na NA 1.46E+01 na NA 2.92E+01 na NA 1.46E+02 na NA 1.46E+02 na NA 1.46E+02 na NA 1.37E+00 na NA 1.37E+00 na NA 1.10E+03 na NA 1.10E+02 na NA 1.10E+02 na NA 1.10E+02 na NA 2.17E+00 na NA 2.17E+00 na NA 2.17E+00 na NA 2.17E-02 na NA 2.17E-01 na	3-nitroaniline	NA	NV		na	ΑN	NA		pa
NA 1.46E+01	2,4-dinitrophenol	NA	7.30E+00		na	Ą	7.50E+03		na
NA 7.30E+00 na NA 2.92E+01 na NA 1.46E+02 na NA 1.46E+02 na NA NV na NA 1.37E+03 na NA 1.37E+00 na NA 1.37E+00 na NA 1.10E+03 na NA 1.10E+02 na NA 1.10E+02 na NA 1.10E+02 na NA 2.17E-02 na NA 2.17E-01 na	dibenzofuran	NA	1.46E+01		na	ΑN	NA		na Eu
NA 2.92E+01 na NA 1.46E+02 na NA NV na NA NV na NA NV na NA 1.37E+00 na NA 4.18E-03 na NA 4.18E-03 na NA 4.18E-03 na NA 4.18E-03 na NA 5.60E-02 na NA 1.10E+02 na NA 1.10E+02 na NA 2.17E-02 na NA 2.17E-00 na NA 2.17E-04 na NA 2.17E-01 na	2,4-dinitrotoluene	NA	7.30E+00		na	ΑN	6.00E+02		na
NA 1.46E+02	4-nitrophenol	A A	2.92E+01		na	Ϋ́	3.00E+04		na
NA 2.92E+03 na	Fluorene	AA	1.46E+02		na	ΑN	7.50E+04		na
NA 2.92E+03 na NA NV NA 3.65E-01 na NA 1.37E+00 na NA 4.18E-03 na NA 4.18E-03 na NA 1.10E+02 na NA 1.46E+02 na NA 1.46E+02 na NA 2.17E-02 na NA 2.17E-02 na NA 2.17E-04 na NA 2.17E-01 na	4-chlorophenyl-phenylether	NA	N		na	NA	NA		na
NA 3.65E-01 na NA NA 3.65E-01 na NA 1.37E+00 na	diethylphthalate	ΑN	2.92E+03		na	NA	1.50E+04		na
NA 3.65E-01 na NA NA 1.37E+00 na	4-nitroaniline	NA A	N<		na	NA	9.00E+03		na
NA 1.37E+00 na NA A.18E-03 na NA 4.18E-03 na NA 5.60E-02 na NA 1.10E+03 na NA 1.46E+02 na NA 1.46E+02 na NA 1.46E+02 na NA 2.17E-02 na NA 2.17E-02 na NA 2.17E-02 na NA 2.17E-02 na NA 2.17E-01 na	4,6-dinitro-2-methylphenol	A V	3.65E-01		пa	NA	5.00E+02		na
NA 4.18E-03 na NA 5.60E-02 na NA 1.10E+03 na NA 1.10E+03 na NA 1.46E+02 na NA 1.46E+02 na NA 1.20E+02 na NA 2.17E-02 na NA 2.17E-01 na NA 2.17E-01 na NA 2.17E-01 na	n-nitrosodiphenylamine(1)	NA	1.37E+00		na	NA	AN		na
NA 4.18E-03 na NA 5.60E-02 na NA 1.10E+03 na NA 3.65E+02 na NA 1.46E+02 na NA 1.46E+02 na NA 2.17E-02 na NA 2.17E+00 na NA 2.17E-02 na NA 2.17E-01 na NA 2.17E-01 na	4-bromophenyl-phenylether	ΑΝ	N		na	NA	NA		na
NA 5.60E-02 na	hexachlorobenzene	NA	4.18E-03		na	NA	7.50E+01		Па
NA NV na NV na NA NA 1.10E+03 na NA 3.65E+02 na NA 1.46E+02 na NA 1.10E+02 na NA 1.30E+02 na NA 2.17E+00 na NA 2.17E-02 na NA 2.17E-01 na NA	pentachlorophenol	A N	5.60E-02		Б	NA	1.50E+03		na
NA 1.10E+03 na NA 3.65E+02 na NA 1.46E+02 na NA 1.10E+02 na NA 2.17E+02 na NA 2.17E+00 na 2.16E-04 4.80E-01 4.50E-04 no 1. NA 2.17E-02 na NA 2.17E-02 na NA 2.17E-01 na NA 2.17E-01 na NA 2.17E-01 na	phenanthrene	AA	N N		Ba	ΑN	2.00E+03		na
NA 1.65E+02 na NA 1.46E+02 na NA 1.10E+02 na NA 7.30E+02 na NA 2.17E+00 na NA 2.17E+00 na 2.16E-04 4.80E-01 4.50E-04 no 1. NA 2.17E-02 na NA 2.17E-02 na NA 2.17E-01 na NA 2.17E-01 na NA 2.17E-01 na NA 2.17E-01 na	anthracene	NA	1.10E+03		na	ΑA	6.00E+03		па
NA 1.46E+02 na NA 1.10E+02 na NA 7.30E+02 na NA 2.17E-02 na NA 2.17E+00 na 2.16E-04 4.80E-01 4.50E-04 no 1. NA 2.17E-02 na NA 2.17E-02 na NA 2.17E-01 na NA 2.17E-01 na NA 2.17E-01 na	dl-n-butylphthalate	Y.	3.65E+02		na	Ϋ́	1.50E+04		na
NA 1.10E+02 na NA 7.30E+02 na NA 2.17E-02 na NA 2.17E+00 na 2.16E-04 4.80E-01 4.50E-04 no 1. NA 7.30E+01 na NA 2.17E-02 na NA 2.17E-02 na NA 2.17E-01 na NA 2.17E-01 na	fluoranthene	NA.	1.46E+02		Ba	ΝA	3.00E+01		na
NA 7.30E+02 na NA 2.17E-02 na NA 2.17E+00 na 2.16E-04 4.80E-01 4.50E-04 no 1. NA 7.30E+01 na NA 2.17E-02 na NA 2.17E-01 na NA 2.17E-01 na NA 2.17E-01 na	pyrene	AA V	1.10E+02		na	NA	1.50E+04		na
NA 2.17E-02 na NA 2.17E-02 na NA 2.17E+00 na NA 1.50E-02 na NA 1.50E-01 4.50E-04 no 1. NA 2.17E-02 na NA 2.17E-01 na	butylbenzylphthalate	NA	7.30E+02		na	NA	5.00E+05		na
NA 2.17E+00 na NA 1.50E-02 na 1.50E-04 4.80E-01 4.50E-04 no 1. NA 7.30E+01 na NA 2.17E-02 na NA 2.17E-01	benzo(a)anthracene	NA A	2.17E-02		na	ΝA	6.00E+02		na
NA 1.50E-02 na 1.50E-02	chrysene	NA	2.17E+00		na	Ϋ́	2.00E+02		na
2.16E-04 4.80E-01 4.50E-04 no 1. NA 7.30E+01 na NA 2.17E-02 na NA 2.17E-01 na NA 2.17E-01 na	3,3-dichlorobenzidine	NA	1.50E-02		В	ΑN	6.21E+03		na L
thalate NA 7.30E+01 na anthene NA 2.17E-02 na anthene NA 2.17E-01 na vrene NA 2.17E-03 na	bis(2-ethylhexyl)phthalate	2.16E-04	4.80E-01	4.50E-04	2	1.62E-02	1.00E+04	1.62E-06	2
anthene NA 2.17E-02 na anthene NA 2.17E-01 na viene NA 2.17E-03 na	dl-n-octylphthalate	NA	7.30E+01		na	Ϋ́	1.50E+05		na
NA 2.17E-01 na NA 2.17E-03 na	benzo(b)fluoranthene	NA	2.17E-02		na	ΑN	AN		na
NA 2 17E-03	benzo(k)fluoranthene	NA	2.17E-01		na	ΑN	NA		na
B11	benzo(a)pyrene	NA	2.17E-03		na	NA	7.50E+03		na

D-7

		DODIC: A080	000	DODIC: A080	080			
Compound	C _{ehronic} (µg/m³)	Health-Based Screening Level (µg/m³)	C _{chronic} / HBSL	× 12	Cacute (µg/m³)	Acute Toxicity Value (µg/m³)	Cacute/ ATV	> 12
Indeno(1,2,3-cd)pyrene	AN	2.17E-02		a	Ą	AN		2
dlbenz(a,h)anthracene	Ϋ́	2.17E-03		E	AN	3 00F+04		2 2
benzo(g,h,l)perylene	NA	N		e	A.	3.00F+04		2
						0.000		
TO-13 (PAHs)								
naphthalene	2.51E-03	3.13E+00	8.02E-04	2	8.07E-02	7 R6F+04	1 035.08	
acenaphthylene	2.02E-04	≥N		Ba	6.51E-03	2.00E+02	3.26E-05	2 2
Acenaphthene	1.34E-05	2.19E+02	6.12E-08	2	4.31E-04	1.25E+03	3 45F-07	丄
fluorene	3.91E-05	1.46E+02	2.68E-07	2	1.26E-03	7.50E+04	1 GRE-OR	+
phenanthrene	3.85E-05	N		na	1.24E-03	2.00E+03	6 20F-07	1
anthracene	4.14E-08	1.10E+03	3.78E-11	2	1.33E-06	6.00E+03	2 22F-10	
fluoranthene	4.05E-05	1.46E+02	2.77E-07	2	1.30E-03	3.00E+01	4 34F-05	
pyrene	6.54E-05	1.10E+02	5.98E-07	2	2.11E-03	1.50F+04	1 40F-07	┸
benzo(a)anthracene	2.67E-05	2.17E-02	1.23E-03	2	2.00E-03	6.00E+02	3 34F-06	
chrysene	2.34E-05	2.17E+00	1.08E-05	2	1.75E-03	2.00E+02	8 77F-06	\perp
benzo(b)fluoranthene	3.14E-05	2.17E-02	1.45E-03	2	5.89E-04	AN		\perp
benzo(k)fluoranthene	2.07E-05	2.17E-01	9.54E-05	2	3.88E-04	NA		2 2
Benzo(e)pyrene	7.63E-05	NV			6.14E-04	NA		2 2
benzo(a)pyrene	2.87E-05	2.17E-03	1.32E-02	9	2.15E-03	7.50E+03	2.87E-07	1
Indeno(1,2,3-cd)pyrene	4.87E-05	2.17E-02	2.25E-03	. 1	9.14E-04	NA		1
dibenz(a,h)anthracene	6.07E-06	2.17E-03	2.80E-03	no	4.56E-04	3.00E+04	1.52E-08	
benzo(g,h,l)perylene	1.34E-04	N		na	4.31E-03	3.00E+04	1.44E-07	
Energetics								
Nitrobenzene	NA	2.09E+00		na	AN	1.51E+04		na
2-Nitrotoluene	ΑN	3.65E+01		na	ΝA	NA		na
3-Nitrotoluene	V.	3.65E+01		na	ΝA	NA		na
4-Nitrotoluene	Ϋ́	3.65E+01		na	NA A	3.37E+04		na
Nitroglycerine	NA VA	4.80E-01		na	NA	NA		na
1,3-Dinitrobenzene	A A	3.65E-01		na	NA	3.00E+03		na
2,6-Dinitrotoluene	AA	3.65E+00		na	۷N	6.00E+02		na
Z,4-Ulnitrotoluene	Ψ.	7.30E+00		na	ΝA	6.00E+02		na
1,3,5-I rinitrobenzene	AA	1.10E+02		na	AN	3.00E+04		a
2,4,8-Trinitrotoluene	ΥN	2.24E-01		na	A A	2.50E+04		na
RDX	NA	6.11E-02		na	ΑĀ	NA		na
4-Amino-2,6-Dinitrotoluene	AN	N		na	NA	NA		la
2-Amino-2,6-Dinitrotoluene	NA	N		na	AA	1.50E+04		na
Tetryl	AN.	3.65E+01		na	N A	NA		na
HMX	ΝA	1.83E+02		na	ΝA	NA		a
Pentaerythritolletranitrate	ď Z	>2		2	Š			

Compound Compound Compound Compound Controlle Cont	C _{chronte} /	na na	Cacute (µg/m³) NA	Acute Toxicity Value (µg/m³)	Cacute/ ATV	
手 音 m m m m m m m m m m m m m m m m m m		eu ua	A A	1 505104		> 12
# E # 8		Вu	AA	+01-10C		2
E Se Se		1		1.00F+04		2
5 es		na	ΑN	3 00F+04		2
NV: No value available. Cehenic: Chronic time-averaged concentration HBSL: Chronic health-based screening level Cacula: Acute time-averaged concentration	Icable if compo	und wa	s not deteci	1		3

Table D-2: Comparison of Air Concentrations With Health-Based Values: Total Petroleum Hydrocarbons

100 meter location

	Cartr	idge, 5.56-mm Bla	Cartridge, 5.56-mm Blank, M200 (M16A1 Rifle)	Rifle)
		אומסמ	DODIC: A080	
Compound (a)	C _{chronle} (µg/m³)	С _{сhronte} (µg/m³)	C _{chronte} (µg/m³)	C _{chronle} (µg/m³)
	Allphatic:C<=8	Allphatic:C>8	Aromatic:C<=8	Aromatic: C>8
Acid Gases				
Propylene	5.03E-02	NA	AN	AN
Propyne (methyl acetylene)	8.38E-03	NA	NA	NA AN
1-Butene/Isobutylene (115-11-7)	1.41E-02	NA	AN	NA
n-Hexane	7.68E-03	NA	NA	AN
Hexane	3.83E-02	NA	NA	NA
Benzene	NA	NA	1.10E-01	AN
Toluene	NA	NA	1.63E-02	AN
Ethylbenzene	NA	NA	3.41E-04	NA
m&p-Xylene	AN	NA	9.41E-04	NA AA
o-Xylene	NA	NA	1.75E-04	NA
Styrene	NA	٩N	NA	1.50E-03
4-Ethyltoluene	NA	NA AN	NA	1.69E-04
1,3,5-Trimethylbenzene	NA	N A	NA	7.37E-05
1,2,4-Trimethylbenzene	NA	NA A	NA AN	9.90E-05
naphthalene	NA	NA	AN	9.22E-06
naphthalene	NA	NA	NA	2.51E-03
acenaphthylene	NA	NA	NA	2.02E-04
Acenaphthene	NA	AN	NA	1.34E-05
fluorene	NA	NA	NA	3.91E-05
phenanthrene	NA	AN	AA	3.85E-05
anthracene	NA	NA	NA	4.14E-08
fluoranthene	NA	NA	NA	4.05E-05
Total (µg/m³)	1.19E-01	0.00E+00	1.28E-01	4.70E-03
Derived Health-Based Screening Level	1.92E+04	1.04E+03	4.17E+02	2.09E+02

Table D-2: Comparison of Air Concentrations With Health-Based Values: Total Petroleum Hydrocarbons

			100 meter location	u
	Cartr	idge, 5.56-mm Bla DODIC	Cartridge, 5.56-mm Blank, M200 (M16A1 Rifle) DODIC: A080	Rifle)
Compound (a)	С _{сhronic} (µg/m³)	Cehronic (µg/m³)	C _{chronic} (µg/m³)	C _{chronic} (µg/m³)
	Allphatic:C<=8	Allphatic:C>8	Aromatic:C<=8	Aromatic:C>8
C _{chronlc} /HBSL	6.19E-06	0.00E+00	3.06E-04	2.25E-05
>12	2	no	OU	OU U
Footnotes;				
>1? = Is the ratio greater than one?				
NA = Not Applicable because compound was not detected				
Cchronic = chronic averaged air Concentration				
HBSL = Health-Based Screening Level				

Table D-3: Comparison of Air Concentrations With Health-Based Values - 200 meter location

		Cartridge, 6	.56-mm 5.56-mm	nm Blank, M2 DODIC: A080	, M200 (N 1080	Cartridge, 6.56-mm Blank, M200 (M16A2 Rifle) DODIC: A080	·	
Compound	C _{chronic} (µg/m³)	Health-Based Screening Level (µg/m³)	C _{chronic} / HBSL	> 17	Cacute (µg/m³)	Acute Toxicity Value (µg/m³)	Cacute/ ATV	> 12
Acid Gases								
Hydrogen fluoride	Ϋ́	N		na	AM	1 60F+03		2
Hydrogen chloride	AN	2.08E+01		2	AN	4 505+03		2
Hydrogen bromide	AN	N		2	ΔN	Q 03E+03		2
Nitric Acid	4.07E-02	N		2	3 28F-01	1 305+03	2 525 04	2 2
Phosphoric acid	NA	1.04E+01		e	Y Y	3.00E+03	Z.32E-04	2 2
Sulfuric Acid	2.31E-02	N		na	1.86E-01	2.00E+03	9 28F-05	2
Cyanide							2010	2
Particulate Cyanide	1.87E-03	7.30E+01	2.57E-05	2	6.03E-02	5.00F+03	1 21E.0E	5
Hydrogen Cyanide	1.28E-01	3.13E+00	4.09E-02	2	4.12E+00	5 17E+03	7 ORE 04	2 2
Particulates						3	1.00-01	2
Total Suspended Particulate	9.19E-01	5.00E+01	1.84E-02	2	7.39E+00	AN		0
PM10	8.49E-01	5.00E+01	1.70E-02	1	6.83E+00	AN		2 2
PM2.5	7.33E-01	1.50E+01	4.89E-02	2	5.90E+00	AN		2
Metals								<u> </u>
Aluminum	2.36E-02	5.11E+00	4.63E-03	2	7.60E-01	3.00E+04	2 53E-05	5
Antimony	8.96E-02	1.46E+00	6.14E-02	2	2.88E+00	1.50E+03	1 92F-03	1
Arsenic	NA	4.47E-04		B	¥	3.00E+01	1.321-00	2 2
Barlum	4.89E-02	5.21E-01	9.38E-02	2	1.57E+00	1.50E+03	1 05F-03	2
Beryllum	NA	8.00E-04		Ba	Ϋ́	5.00E+00		2
Cadmium	NA	1.07E-03		na	¥	3.00E+01		2
Calclum	1.04E-02	N/		na	3.33E-01	3.00E+04	1.11E-05	2
Chromlum	AN	1.53E-04		na	¥	1.50E+03		ē
Cobalt	AN	2.20E+02		na	NA	6.00E+01		Ba
Copper	4.51E-02	1.46E+02	3.09E-04	2	1.45E+00	3.00E+03	4.83E-04	2
Lead	1.19E-01	1.50E+00	7.95E-02	2	3.84E+00	1.50E+02	2.56E-02	2
Mengeran	Y S	AN .		Ba	¥	3.00E+04		B
Motor	Y.	5.11E-0Z		g	AN	3.00E+03		па
INCABI	Y.	7.30E+01		B	¥	3.00E+03		па
minuage	Ϋ́Α	1.83E+01		na	AN	6.00E+02		na
Silver	Y.	1.83E+01		na	NA	3.00E+02		E
nalium	AN	2.56E-01		na	AN	3.00E+02		2
Vanadium	NA	2.56E+01		na	AN	1.50E+02		na
Zinc	1.49E-02	1.10E+03	1.36E-05	9	4.80E-01	3.00E+04	1.60E-05	2
TO-11 Carbonyls								
Formaldehyde	3.04E-03	1.48E-01	2.05E-02	2	5.70E-02	1.23E+03	4.63E-05	2
Acetaldehyde	NA	8.73E-01		na	ΑN	1 80F+04		

	,	Cartridge, 5:56-mm Blank, M200 (M16A2 Rifle) DODIC: A080	58-mm E	nm Blank, M2 DODIC: A080	M200 (M 080	16A2 Rifle)	-	
Compound	Cehronic (µg/m³)	Health-Based Screening Level (µg/m³)	C _{chrontc} / HBSL	× 12	C _{acute} (µg/m³)	Acute Toxicity Value (µg/m³)	Cacute/ ATV	> 12
Acetone	ΨZ	3.65E+02		Ba	¥	2.37E+06		Ē
Acrolein	ΑN	2.09E-02		na	¥	2.30E+02		na
Proprionaldehyde	AN	N<		na	¥	7.50E+04		au
Crotonaldehyde	۸A	3.54E-03		пa	Ϋ́	5.72E+03		a
Butyraldehyde	۸A	NV		na	NA	7.38E+04		na
Benzaldehyde	AN	3.65E+02		na	NA	1.50E+04		na
Isovaleraldehyde	Ą	N/		na	ΑN	NA		BE
Valeraldehyde	AA	NV		ทล	NA NA	NA		na
o,m,p-Tolualdehyde	NA	NV		na	NA	NA		na
Hexaldehyde	NA	N		na	NA	NA		na
2,5-Dimethylbenzaldehyde	NA	N		na	NA	NA NA		g
Hydrocarbons								
Methane	2.01E-01	N		g	6.46E+00	3.30E+06	1.98E-06	20
Ethylene	8.11E-02	N			2.61E+00	4.60E+05	5.67E-06	
Acelylene	5.09E-02	N		na	4.09E-01	NA		na
Ethane	9.03E-03	NV		na	7.26E-02	NA		na
Propylene	1.93E-02	NV		na	1.55E-01	NA		na
Propane	NA	NV		na	NA	3.78E+06		na
Propyne (methyl acetylene)	3.21E-03	NV		na	1.03E-01	2.79E+06	3.70E-08	20
Isobutane	NA	NV		na	NA	9.52E+05		na
1-Butene/Isobutylene (115-11-7)	5.39E-03	NV		na	1.73E-01	6.87E+06	2.52E-08	no
1,3-Butadiene/butane	NA	3.74E-03		na	NA	2.20E+04		กล
cis-butene	NA	N		na	NA	1.72E+04		na
1-Butyne	NA	N		na	۸	NA		na
frans-Butene	VA	N	-	na	Ϋ́	1.72E+04		na
2-Butyne (crotonylene)	ΑN	≥		na	¥	AA		na
n-Pentane	NA A	N		na	A A	1.80E+06		na
п-Нехапе	2.94E-03	2.10E+02	1.40E-05	no	9.47E-02	5.28E+05	1.79E-07	no
Dioxins/Furans								
2378-Tetrachlorodibenzo-p-dloxin	AN	4.48E-08		na	¥	3.50E+00		na
12378-Pentachlorodibenzo-p-dloxin	NA	N/		na	NA	2.50E+00		na
123478-Hexachlorodibenzo-p-dloxin	NA	NV		na	NA	NA		na
123678-Hexachlorodibenzo-p-dloxin	NA	N N		na	NA	1.50E+01		ทล
123789-Hexachlorodibenzo-p-dloxin	NA	1.48E-06		na	NA	NA		ทล
1234678-Heptachlorodibenzo-p-dloxin	AN	N		na	NA	. NA		na
ocop	2.61E-10	N/		na	8.40E-09	1.50E+02	5.60E-11	on
2378-Tetrachlorodibenzo-p-furan	NA	N		na	NA	2.00E+00		na
12378-Pentachlorodibenzo-p-furan	AN	N/		na	NA	AN		na
23478-Pentachlorodibenzo-o-furan	AN	N/		na	NA	7.50E-02		na

			2		DODIC: A080			
Compound	Cehrante	Health-Based	Cehronic/		Ü	Acute Toylette	-	
	(hg/m³)	(hg/m³)	HBSL	× 1×		Value (µg/m³)	ATV	> 12
123478-Hexachlorodibenzo-p-furan	ΑN	N		2	MA	7 505		
123678-Hexachlorodibenzo-p-furan	¥	2		2	4	0.505+00		па
123789-Hexachlorodibenzo-p-furan	AN A	2		2	Z V	Z.50E+00		па
234678-Hexachlorodibenzo-p-furan	¥	2		2	2	Y.		na
1234678-Heptachlorodibenzo-p-furan	AN	2		2 2	¥ S	1.50E+00		na
1234789-Heptachlorodibenzo-p-furan	Ϋ́	N.		2	\$ 2	¥.		Ba
OCDF	AN	N.		2	¥ S	AN.		na
Permanent Gases				2	¥	3.00E+02		na
Ammonla (NH3)	NA	1.04E+02		2	VIA			
Carbon Dioxide (CO2)	2.75E+01	N.		2 2	YN O	1.75E+04		na
Carbon Monoxide (CO)	3.41E+01	1.00E+04	3 415.03	2	2 745 02	5.40E+07	1.64E-05	2
Oxides of Nitrogen (as NO)	1.58E+00	1.00E+02	1 58F-02	2 2	5.14E+02	2.30E+05	1.19E-03	2
Sulfur Dioxide (SO2)	1.57E-02	8.00E+01	1 96F.04	2 2	1 28E 04	3.08E+04	1.66E-03	2
VOCs				2	1.40E-01	7.89E+02	1.60E-04	2
Propene	1.28E-02	N<		2	1 03E-01	MA		
Ulchlorodifluoromethane	5.93E-06	2.09E+02	2.84E-08	2	1 91E-04	4 405 103	1, 200	2
Chlorodifluoromethane	NA	5.11E+04		2	NA	4.465+07	1.28E-11	의
Freon 114	ΝΑ	2		B	Ą	2 105107		<u> </u>
Chloromethane	9.30E-06	1.07E+00	8.72E-06	2	6.98F-04	2.10E+07	2007	E E
Vinyl Chloride	AN	2.20E-02		E	NA NA	1 28E+04	3.38E-UB	2
1,3-Butadiene	1.36E-04	3.74E-03	3.65E-02	2	2.56E-03	2 20F±04	4 400 07	E
Bromomethane	NA.	5,21E+00		па	¥	5.82E+04	1.105-07	2 2
Dichlorofinane	Ψ.	2.32E+00		na	¥	2.64E+06		2 2
Trichlorofficomothers	NA 1	2.09E+02		BL	¥	1.48E+07		2 2
Daniana	1.12E-05	7.30E+02	1.54E-08	20	3.61E-04	2.81E+06	1.29E-10	
Acroloin	A 201	N		na	Ϋ́	1.80E+06		2 2
1.1-Dichloroethana	1.39E-02	2.09E-02	6.66E-01	2	1.12E-01	2.30E+02	4.85E-04	2
Freon 113	2 2	3.21E+UZ		ā	ΑN	7.92E+04		a
Acetone	2 4	3.13E+04		E	Ϋ́	9.58E+06		E
Methyl fodide	AN	3.03E+02		g	¥	2.37E+06		E
Carbon Disuifide	1 915-03	7 305 400	200	E	ΨV	1.45E+05		na
Acetonitrile	1.81E-02	R 20E±04	2.62E-06	2	6.16E-02	3.1.1E+04	1.98E-06	2
3-Chloropropene	NA NA	1 045+00	4.81E-U4	2	5.81E-01	1.01E+05	5.76E-06	2
Methylene Chloride	3.69E-03	4 09E+00	D DAE DA	2	NA	9.39E+03		na
tert-Butyl Alcohol	NAN NA	N A	9.04E-04	2	0.93E-UZ	6.96E+05	9.96E-08	no
Acrylonitrile	1.89E-03	2 83E-02	8 70E 02	E :	AN S	4.55E+05		na
trans-1,2-Dichloroethene	AA	7.30F+01	0.10E-02	2 2	3.555-02	2.17E+04	1.64E-06	no
Methyl t-Butyl Ether	AN	3 135+03	1	2	¥.	4.95E+04		na
		0.10.		2	NA	4.32E+05		na

	20 Y	Cartridge, 6:56-inm Blank, M200 (M16A2 Riffe)	.56-mm	Slank	M200 (M	_		
			חסח	DODIC: AUSU	080			
Compound	C _{chronic} (µg/m³)	Health-Based Screening Level (µg/m³)	C _{chronic} / HBSL	> 12	C _{acute} (µg/m³)	Acute Toxicity Value (µg/m³)	Cacute/ ATV	> 12
Нехапе	1.47E-02	2.09E+02	7.04E-05	2	4.72E-01	5,28E+05	8.94E-07	2
1,1-Dichloroethene	AN	5.21E+02		na	Ϋ́	7.92E+04		BE
Vinyl Acetate	¥	2.09E+02		na	۸A	1.92E+04		na
cis-1,2-Dichloroethene	ΑN	3.65E+01		na	ΑN	7.92E+05		пa
2-Butanone	1.09E-04	1.04E+03	1.05E-07	20	3.52E-03	8.85E+05	3.98E-09	2
Ethyl Acetate	8.50E-04	3,29E+03	2.59E-07	2	2.74E-02	1.44E+06	1.90E-08	ou
Methyl Acrylate	NA	1.10E+02		na	NA	NA		na
Chloroform	NA	8.35E-02		na	NA	9.76E+03		na
1,1,1-Trichloroethane	ΝA	1.04E+03		пa	NA	1.94E+06		na
Carbon Tetrachloride	ΑN	1.28E-01		na	NA	1.28E+05		na
1,2-Dichloroethane	3.52E-04	7.39E-02	4.76E-03	90	2.64E-02	8.08E+03	3.27E-06	2
Benzene	1.81E-02	2.49E-01	7.25E-02	2	3.39E-01	1.56E+05	2.17E-06	2
Isooctane (2,2,4-trimethylpentane)	ΑN	N		na	¥	3.50E+05		na
Heptane	ΑN	λ		па	ΝA	1.80E+06		пa
Trichloroethane	NA	1.04E+03		na	NA	1.94E+06		na
Ethyl Acrylate	NA	1.40E-01		BU	NA	6.14E+04		na
1,2-Dichloropropane	NA A	9.89E-02		ВU	NA	5.08E+05		na
Methyl Methacrylate	Ν	7.30E+02		BU	NA	4.09E+05		na
Dibromomethane	NA	3.65E+01		na	NA	2.50E+05		na
1,4-Dioxane	AN	6.11E-01		Bu	NA	9.00E+04		na
Bromodichloromethane	AN	1.08E-01		ua	NA	4.00E+03		вu
4-Methyl-2-Pentanone	2.45E-04	8.34E+01	2.94E-06	2	7.89E-03	3.07E+05	2.57E-08	ou
Toluene	6.24E-03	4.02E+02	1.55E-05	9	5.02E-02	1.88E+05	2.68E-07	ou.
Octane	NA	N		BE	NA NA	NA NA		na
frans-1,3-Dichloropropene	NA	5.17E-02		B	NA	NA		na
Ethyl Methacrylate	NA	3.29E+02		8	A	NA NA		na
1,1,2-Trichloroethene	٧N	1.20E-01		Ba	ΑĀ	1.64E+05		na
Tetrachloroethene	NA	3.31E+00		6	¥	6.78E+05		na
2-Hexanone	ΑΝ	5.11E+00		B	₹	4.09E+04		na
Olbromochloromethane	AN	8.00E-02		na	A	6.00E+03		na
1,2-Dibromoethane	NA	8.73E-03		na	A	1.54E+05		na
Chlorobenzene	AN	6.21E+01		na	NA			na
1,1,1,2-Tetrachioroethane	AN	2.60E-01		na	۸N	5.15E+04		na
Ethylbenzene	1.31E-04	1.06E+03	1.24E-07	2	4.21E-03		7.76E-09	00
m&p-Xylene	3.60E-04	7.30E+02	4.94E-07	Н	1.16E-02	6.51E+05	1.78E-08	2
o-Xylene	6.70E-05	7.30E+02	9.18E-08	20	2.16E-03	6.51E+05	3.31E-09	uo
Styrene	5.76E-04	1.06E+03	5.44E-07	2	4.63E-03	2.13E+05	2.17E-08	00
Bromoform	AN	1.75E+00		na	NA	6.20E+03		na
Cumene	۸A	4.02E+02		na	AN	2.46E+05		na

		Cartridge,	5.58-mm	Blan	k, M200 (n	Cartridge, 5.56-mm Blank, M200 (M16A2 Rifle)		
			8	<u>ပ</u>	DODIC: A080			
	Ü	Health-Based						
Compound	(m/Brl)	Screening Level	Cehronic	> 12	(ng/m³)	Value (ug/m³)	Cacute/	> 12
1 1 2 2 Telenoplanach		(
4 2 3 Table	NA.	3.31E-02		na	Ϋ́	2.06F+04		
Bromohanan	₹.	9.61E-04		멸	AN	6.03E+04		2 2
4-Ethyllollogo	AN C	1.04E+01		an	¥	4.82E+04		2
1 2 & Trimothulbeness	0.4/E-05	ě		na	2.08E-03	1.25E+05	1 R7E_08	2
Alpha Methyl Spyces	2.83E-05	6.21E+00	4.55E-06		9.09E-04	3.68E+05	2 47E-00	2 2
1 2 4-Trimethylboneses	AN COLO	2.56E+02		æ	¥			2 2
	3.78E-05	6.21E+00	6.12E-06	2	1.22E-03	1.8	6.78F.09	2
1 4-Dichlorohensene	AA	3.29E+00		na	¥		2010	2 2
Benzyl Chlodde	Y S	3.06E-01		na	ΑĀ	6.61E+05		2 2
1.2-Dichlorobaryana	YA.	3.96E-02		na	ΑN	5.20E+03		2
Hexachlorethene	Y S	2.09E+02		па	Ϋ́	3.01E+05		2 2
1.2.4-Trichlorobanzana	Z V	4.80E-01		na	۸A	2.90E+04		2
Hexachiorobiitadiene		2.08E+02		na	ΑN	3.71E+04		2
	Š	8.73E-02		28	٧A	3.21E+04		2
SVOCe								
n-nitrosodimethylamina	VIV	, 0 110 /						T
bis(2-chloroethylathar		1.37E-04			ΑN	2.50E+03		2
ioned de la constante de la co	- N	5.8ZE-03		na	AA	5.85E+04		2 2
Dilbird Section of the Control of th	6.86E-04	2.19E+03	3.13E-07	2	2.21E-02	3.85E+04	5 74E.07	2
1 3-Dichlorohomens	Ψ.	1.83E+01		пa	¥	5,25E+03	2	2 2
1 4-dichlorogene	¥.	3.29E+00		na	¥	3.61E+04		B 8
1.2-dichlorohanzana	YY.	3.06E-01		na	Ϋ́	6.61E+05		2 2
benzyl alcohol	Y Y	2.09E+02		ทล	۸A	3.01E+05		2
bis(2-chlorolsopropyl)ather	V V	1.10E+03		na	AN	5.53E+04		2
2-methylphenol	AN	1 835-01		Ba	¥	6.99E+04		Ba
hexachloroethane	¥	4 ROF-01		na E	¥.	NA		пa
n-nitroso-di-n-propylamine	A.Y	9.615-04		2	¥2	2.90E+04		na
4-methylphenol	ΑN	1.83E+02		E 5	¥ S	2.00E+02		na
nitrobenzene	ΑN	2.09E+00		8	2 4	NA.		Б
Isophorone	ΑN	7.08E+00		2 2	¥ 5	1.51E+04		na
2-nltrophenol	¥	N.		2 3	¥.	2.83E+04		na
2,4-dimethylphenol	Α×	7.30F+01		2	¥ S	NA		na
bls(2-chloroethoxy)methane	¥	N.		2	¥.	NA NA		na Fu
2,4-dichlorophenol	¥	1.10F+01		2 3	¥.	Ψ.		na
1,2,4-trichlorobenzene	¥	2 08E+02		2	¥.	3.00E+04		na
naphthalene	3.53E-06	3.13E+00	1 13E_08	2 2	AN I	3.71E+04		па
4-chloroaniline	NA NA	1.46F+01	1.121	2 8	1. 14E-04	7.86E+04	1.45E-09	9
hexachlorobutadiene	¥	R 67E-02	1	2	¥.	3.00E+04		Вa
		2021 05		<u> </u>	¥2	3.21E+04		na

ра (т. п.	onic		000	DODIC: A080				
	onic				2			
	(m ₃)	Health-Based Screening Level (µg/m³)	C _{chronlc} / HBSL	> 12	Cacuta (µg/m³)	Acute Toxicity Value (µg/m³)	G _{acute} / ATV	> 12
	4	N		na	NA	2.00E+04		na
	V	7.30E+01		na	NA	2.00E+04		na
	A	7.30E-02		na	NA	2.23E+02		na
	A	1.10E+02		na	NA	3.00E+04		g
	¥	3.65E+02		na	NA	3.00E+04		Ba
	A	2.92E+02		na	NA	6.00E+02		па
	A	2.09E-01		na	NA	NA		BE
	⋖	N/		na	NA	2.00E+02		na
	⋖	3.65E+04		BU	NA	1.50E+04		na
	⋖	3.65E+00		na	Ν	6.00E+02		na
	⋖	2.19E+02		na	AN	1.25E+03		na
	₹	N		มล	AN	NA		BE
	₹	7.30E+00		na	AN A	7.50E+03		Ba
	≰	1.46E+01		มล	NA V	NA		na
	¥	7.30E+00		เล	¥	6.00E+02		a
	₹	2.92E+01		BU	NA	3.00E+04		ē
	₹	1.46E+02		na	NA	7.50E+04		na
	₹	Ž		na	NA	NA A		B
	₹	2.92E+03		na	ΑN	1.50E+04		ā
	Ϋ́	N/		na	ΥN	9.00E+03		a
4,6-dinitro-2-methylphenol	NA	3.65E-01		na	ΝΑ	5.00E+02		ē
	NA	1.37E+00		na	AN	ΨN		B
	NA	N/		na	Ϋ́	AN		B
	NA	4.18E-03		na	Y Y	7.50E+01		ш
phenol	NA	5.60E-02		na	¥	1.50E+03		a B
	NA	NV		na	Š	2.00E+03		g
	NA	1.10E+03		na	¥	8.00E+03		E I
dl-n-butyiphthalate N	NA	3.65E+02		B	¥	1.50E+04		g
N Iluoranthene	٨A	1.46E+02		na I	Y.	3.00E+01		e
9	NA	1.10E+02		па	¥	1.50E+04		E P
N butytbenzylphthalate N	NA	7.30E+02		Bu	Ϋ́	5.00E+05		티
	NA	2.17E-02		na	Ϋ́	6.00E+02		na
ne	NA	2.17E+00		na	Υ Y	2.00E+02		밀
zidine	ΑĀ	1.50E-02		na	A V	6.21E+03		_
bis(2-ethylhexyl)phthalate 8.29	8.29E-05	4.80E-01	1.73E-04	9	6.22E-03	1.00E+04	6.22E-07	_
	AA	7.30E+01		na	¥	1.50E+05		g
	NA	2.17E-02		na	NA	AN		g
	NA	2.17E-01		na	ΝΑ	AN		B
	٨	2.17E-03		na	٩	7.50E+03		밀

		Cartridge, 5.56-mm Blank, M200 (M16A2 Rifle) DODIC: A080	.56-mm E	nm Blank, M2 DODIC: A080	, M200 (N \080	116A2 Rifle)		
Compound	C _{chronle} (µg/m³)	Health-Based Screening Level	C _{chrontc} / HBSL	> 12	Cacute (ug/m³)	Acute Toxicity	Cacute/	× 12
		(µg/m)			, BL	(mad) ones		
Indeno(1,2,3-cd)pyrene	ΔA	2.17E-02		na	ΑN	Š		å
dibenz(a,h)anthracene	AN	2.17E-03		g	Ą	3.00F+04		2
benzo(g,h,i)perylene	ΑN	N<		ē	¥	3.00E+04		2 2
TO-13 (PAHs)								
naphthalene	9.61E-04	3.13E+00	3.07E-04	2	3.09E-02	7 RRE+04	2 025 07	1
acenaphthylene	7.76E-05	N N		na	2.50E-03	2 DOF +02	1 25E OF	
Acenaphthene	5.14E-06	2.19E+02	2.35E-08	2	1.65E-04	1.25F+03	1 32E 07	2 8
fluorene	1.50E-05	1.46E+02	1.03E-07	2	4.82E-04	7.50F+04	8 43E-00	2 2
phenanthrene	1.48E-05	N		na	4.75E-04	2.00F+03	2 38E-07	2 8
anthracene	1.59E-08	1.10E+03	1.45E-11	2	5.10E-07	6.00F+03	8 51E 11	
fluoranthene	1.55E-05	1.46E+02	1.06E-07	2	4.99E-04	3.00F+01	1 88E OF	2 2
pyrene	2.51E-05	1.10E+02	2.29E-07	2	8.07E-04	1 50E+04	5 20C 00	- 1
benzo(a)anthracene	1.02E-05	2.17E-02	4.71E-04	2	7.68E-04	6.00F+02	1 28E 08	
chrysene	8.95E-06	2.17E+00	4.13E-06	2	6.72E-04	2 DOE+02	2 28E 08	- 1
benzo(b)fluoranthene	1.20E-05	2.17E-02	5.54E-04	2	2.26F-04	NA NA	3.305-00	2
benzo(k)fluoranthene	7.93E-06	2.17E-01	3.65E-05	2	1.49E-04	NA		
Benzo(a)pyrene	2.92E-05	N		Ba	2.35E-04	AN		2 2
benzo(a)pyrene	1.10E-05	2.17E-03	5.07E-03	2	8 25F-04	7 505±03	4 405 07	2
Indeno(1,2,3-cd)pyrene	1.87E-05	2.17E-02	8.61E-04	2	3.50E-04	NA	1.105-07	2 2
dibenz(a,h)anthracene	2.33E-06	2.17E-03	1.07E-03	2	1.75E-04	3 00F+04	S ROE OO	
benzo(g,h,l)perylene	5.13E-05	2		na	1.65E-03	3.00F+04	5.02E-08	
Energetics							200	2
Nitrobenzene	ΝΑ	2.09E+00		na	¥	1.51E+04		60
2-Nitrotoluene	Ϋ́	3.65E+01		na	¥	NA AA		2
3-Nitrotoluene	AN	3.65E+01		Вп	ΑN	NA AA		2
4-Nitrotoluene	AN	3.65E+01		na	AN AN	3.37E+04		2 2
Mitrogrycerine	ΑN	4.80E-01		na	Ϋ́	A'A		2
1,3-Dinitrobenzene	¥.	3.65E-01		na	AN	3.00E+03		B
Z,o-Dinitrotoluene	Y.	3.65E+00		na	AN	6.00E+02		E
2,4-Umirotoluene	¥.	7.30E+00		na	ΝA	6.00E+02		B
1,5,5-1 mitrobenzene	ΨŽ	1.10E+02		na	Ϋ́	3.00E+04		E
2,4,0-1 rinkrototuene	NA.	2.24E-01		na	NA	2.50E+04		na
A America 2 or Fried A	AN.	6.11E-02		na	NA	AN		B
2 Amino 2 Print 1	ΥA	2		na	NA	AN		Ba
Z-Milliozoliuene	NA.	N N		na	AN	1.50E+04		g
Terry	NA.	3.65E+01		na	NA	AN		g
Dontoonthilettete	AN .	1.83E+02		na	۸A	NA		na
anali mananananananananananananananananananan	NA NA	NS.		Ba	YA.	5.00E+01		na

			DOC	DODIC: A080	DODIC: A080			
Compound	C _{ehronic} (µg/m³)	Health-Based Screening Level (µg/m³)	C _{chranic} / HBSL	> 1?	C _{acute} (µg/m³)	Acute Toxicity Value (µg/m³)	Cacute/ ATV	> 1?
Dibutyl Phthalate	ΝA	3.65E+02		ทล	NA	1.50E+04		มล
Dioctyl Phthalate	NA	4.80E-01		na	NA	1.00E+04		na
Diphenylamine	NA	9.13E+01		na	NA	3.00E+04		na
Footnotes: NA: Not applicable because compound was not detected na: Not available because health-based sceening value is NV: No value available Cenner: Chronic time-averaged concentration HBSL: Chronic health-based screening level Cacote: Acute time-averaged concentration ATV: Acute toxicity value	not detected sning value is not	use compound was not detected is health-based sceening value is not available or not applicable if compound was not detected raged concentration ased screening level jed concentration s	able If compo	w bund	s not detect	pe		

Table D-4: Comparison of Air Concentrations With Health-Based Values: Total Petroleum Hydrocarbons

200 meter location

3) C _{chronic} (μg/m³) 8		Cartr	ldge, 5.56-mm Bla DODIC	Cartridge, 5.56-mm Blank, M200 (M16A2 Rifle) DODIC: A080	Riffe)
Aliphatic:C<=8	Compound (a)	С _{сыгонс} (µg/m³)	C _{chronic} (µg/m³)	С _{сhronic} (µg/m³)	С _{сhronic} (µg/m³)
1.93E-02 NA NA NA 3.21E-03 NA NA 5.39E-03 NA NA 2.94E-03 NA NA 1.47E-02 NA N		Allphatic:C<=8	Allphatic:C>8	Aromatic:C<=8	Aromatic.C>8
1.93E-02 NA NA NA 3.21E-03 NA NA NA 5.39E-03 NA NA NA 2.94E-03 NA NA NA 1.47E-02 NA NA A.21E-02 NA NA NA A.21E-02 NA N	Acid Gases				
3.21E-03 NA NA NA 5.39E-03 NA NA 2.94E-03 NA NA 1.47E-02 NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA NA	Propylene	1.93E-02	AN	AN	AN
5.39E-03 NA NA NA 2.94E-03 NA NA NA 1.47E-02 NA NA A.21E-02 NA NA 4.21E-02 NA NA 4.21E-02 NA NA 4.21E-02 NA NA A.21E-02 NA NA NA NA <	Propyne (methyl acetylene)	3.21E-03	NA	NA AN	AN
2.94E-03 NA	1-Butene/Isobutylene (115-11-7)	5.39E-03	AN	NA.	AN
1.47E-02 NA	n-Hexane	2.94E-03	NA	NA	NA
NA NA 4.21E-02 NA NA 6.24E-03 NA NA 1.31E-04 NA NA 1.31E-04 NA NA 1.31E-04 NA NA 1.31E-04 NA NA NA NA	Hexane	1.47E-02	AN	NA	AN
NA NA 6.24E-03 NA NA 1.31E-04 NA NA 3.60E-04 NA NA NA NA NA	Benzene	NA	NA	4.21E-02	NA
NA NA 1.31E-04 NA NA 3.60E-04 NA NA 6.70E-05 NA NA NA 1.92E+04 1.04E+03 4.17E+02	Toluene	AN	NA	6.24E-03	AN
NA NA 3.60E-04 NA NA 6.70E-05 NA NA NA 1.92E+04 1.04E+03 4.17E+02	Ethylbenzene	AN	AN	1.31E-04	AN
NA NA 6.70E-05 NA NA NA 1.92E+04 1.04E+03 4.17E+02	m&p-Xylene	NA	NA	3.60E-04	AN
NA NA NA 1.92E+04 1.04E+03 4.17E+02	o-Xylene	NA	NA	6.70E-05	NA
NA NA NA 1.92E+04 1.04E+03 4.17E+02	Styrene	NA	AN	۸A	5.76E-04
NA NA NA 1.92E+04 1.04E+03 4.17E+02	4-Ethyltoluene	AN	NA	NA	6.47E-05
NA NA NA 1.92E+04 1.04E+03 4.17E+02	1,3,5-Trimethylbenzene	AN	NA	NA	2.83E-05
. NA NA NA 1.92E+04 1.04E+03 4.17E+02	1,2,4-Trimethylbenzene	AN	NA	NA	3 79F-05
NA 1.92E+04 1.04E+03 4.17E+02	naphthalene	NA	NA	NA	3.53E-06
NA 1.92E+04 1.04E+03 4.17E+02	naphthalene	NA	NA	NA	9.61E-04
NA N	acenaphthylene	NA	NA	NA	7.76E-05
NA N	Acenaphthene	NA	NA	NA	5.14E-06
NA N	fluorene	NA	NA	NA	1.50E-05
NA NA NA NA NA NA NA NA NA 4.55E-02 0.00E+00 4.89E-02 1.92E+04 1.04E+03 4.17E+0.2	phenanthrene	NA	NA	NA	1.48E-05
A.55E-02 0.00E+00 4.89E-02 1.92E+04 1.04E+03 4.17E+02	anthracene	NA	AA	AN	1.59E-08
4.55E-02 0.00E+00 4.89E-02 1.92E+04 1.04E+03 4.17E+02			NA	NA	1.55E-05
1.92E+04 1.04E+03 4.17E+02	Total (µg/m³)		0.00E+00	4.89E-02	1.80E-03
10.11	Derived Health-Based Screening Level	1.92E+04	1.04E+03	4.17E+02	2.09E+02

Table D-4: Comparison of Air Concentrations With Health-Based Values: Total Petroleum Hydrocarbons

200 meter location

	Cartri	ldge, 5.56-mm Blå DODÍC	Cartridge, 5.56-mm Blank, M200 (M16A2 Rifle) DODÍC: A080	Rífle)
Compound (a)	С _{сhronic} (µg/m³)	C _{chronle} (µg/m³)	С _{енгопіс} (µg/m³)	C _{chronle} (µg/m³)
	Allphatic:C<=8	Allphatic:C>8	Aromatic:C<=8	Aromatic:C>8
C _{chronlc} /HBSL	2.37E-06	0.00E+00	1.17E-04	8.63E-06
>12	no	10	2	OU
Footnotes: >17 = Is the ratio greater than one? NA = Not Applicable because compound was not detected Controlle = chronic averaged air Concentration			·	

HBSL = Health-Based Screening Level

APPENDIX E

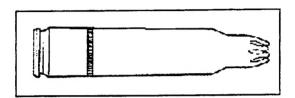
FACT SHEET SUBMITTED TO THE U.S. ARMY ENVIRONMENTAL CENTER

U.S. Army Environmental Center Training Munitions Fact Sheet

M200 5.56-mm Blank Cartridge

Department of Defense Identification Code: A080

Breathing air emissions from the M200 5.56-mm blank cartridge will not impact the health of residents who live as close as 200 meters (656 feet) from the firing location.



To be fully prepared to protect our country, U.S. soldiers must train with many different weapons and munitions, including the M200 5.56-mm blank cartridge. This training is important because it helps prepare our soldiers for a variety of combat situations. While the Army recognizes the value of such comprehensive training on our installations, we also work hard to ensure the safety and health of surrounding communities.

WILL BREATHING AIR EMISSIONS FROM THE M200 5.56-MM BLANK CARTRIDGE AFFECT MY HEALTH?

To answer this question, the U.S. Army tested the air emissions that are released when the M200 is fired. The information gathered during these tests was then analyzed to determine if there would be a potential for health effects from inhalation to residents who live near training areas. Study results, generated using conservative methods, showed that offsite residents breathing air as close as 200 meters (656 feet or about the length of two football fields) from the firing location are safe from these emissions. If offsite residents are located less than 200 meters from the firing locations, a more site-specific evaluation would be necessary. It should be noted that at most locations, training areas are at least 1,000 meters (over half a mile) away from populated areas and the distance to firing locations may be even farther.

HOW WAS THE STUDY CONDUCTED?

To gather data for this study, the M200 was fired from the M16A1 rifle in a test chamber. The air in the chamber was then tested to identify the types and amounts of substances released. About 300 different substances were looked for during this part of the study.

This information was then used in an U.S. Environmental Protection Agency (USEPA) approved air model (a computer program that allows estimation of air concentrations) to determine the amount of each substance to which someone

living near a training site might be exposed. Downwind concentrations were estimated based on a typical use scenario for the M200 during training exercises. Since this study did not look at any one specific training area, the assumptions used in the model would, in most cases, predict higher downwind air concentrations than those expected at an actual training site.

These estimated air concentrations were then compared to screening levels established by the USEPA and other federal agencies. If the air concentrations are less than these screening levels, they are considered safe for the general population, including sensitive people such as the sick, elderly, and children.

WHAT ARE THE STUDY LIMITATIONS?

Many steps were taken to ensure that the results of this study are protective of residents who live near training facilities. However, as with any study, this study has limitations. For example, the study does not consider exposure to other types of munitions that could also be used during the same training event. Due to these limitations, conservative model conditions were used to ensure the protection of public health from breathing M200 air emissions.

WHAT EXACTLY IS THE M200 5.56-MM BLANK CARTRIDGE?

The M200 is a blank cartridge used only in training. It has no projectile and is used to simulate firing in training exercises and for saluting purposes, such as the 21-gun salute at military funerals. To use the M200, a device is attached to the muzzle of the rifle to allow for firing of blank ammunition. The M200 consists of a metal case containing mostly copper and zinc. The propelling charge is made up primarily of nitrocellulose and nitroglycerine. Nitrocellulose is commonly used in furniture lacquers, printing inks, nail polish, and as a primary ingredient in smokeless propellants for military and commercial use. Nitroglycerin is a component of dynamite and is used for military and industrial purposes such as mining and demolition. The M200 can be identified by its crimped closure at the violet-colored cartridge tip.

WHERE CAN I GET MORE INFORMATION?

For more information on the M200 or other military munitions, please call the Army Environmental Hotline at 1-800-USA-3845, visit our Web site at www.aec.army.mil, or e-mail t2hotline@aec.apgea.army.mil.